Are Memorials just for remembering? A study of natural disaster memorials in New Zealand and Japan.

A Thesis

submitted in fulfilment

of the requirements for the Degree of

Master of Landscape Architecture

at

Lincoln University

by

Louise Bailey

Lincoln University

2020

Abstract of a Thesis submitted in partial fulfilment of the

requirements for the Degree of Master of Landscape Architecture.

Are Memorials just for remembering? A study of natural disaster memorials in New Zealand and Japan

by

Louise Bailey

A B S T R A C T

When a tragedy occurs of local or national scale throughout the world a memorial is often built to remember the victims, and to keep the tragedy fresh in the minds of generations with the conviction that this must not be repeated. Memorials to commemorate natural disasters very to the objective of a human induced tragedy in that future catastrophic events that affect the lives and livelihood of many citizens are sure to reoccur in countries that are geographically pre-disposed to the ravages of nature. This thesis examines memorial sites as case studies in New Zealand and Japan to explore the differences in how these two countries memorialise earthquakes, and tsunamis in the case of Japan, and whether there are lessons that each could learn from each other. In so doing, it draws largely on scholarly literature written about memorials commemorating war as little is written on memorials that respond to natural disasters. Visited case sites in both countries are analysed through multiple qualitative research methods with a broad view of what constitutes a memorial when the landscape is changed by the devastation of a natural disaster. How communities prepare for future events through changes in planning legislation, large scale infrastructure, tourism and preparedness for personal safety are issues addressed from the perspective of landscape architecture through spatial commemorative places. The intentions and meanings of memorials may differ but in the case of a memorial of natural disaster there is a clear message that is common to all. To reduce the severity of the number of deaths and level of destruction, education and preparedness for future events is a key aim of memorials and museums.

Keywords: Memorial, spatial, education, natural disaster, New Zealand, Japan.

Acknowledgements

Writing a Master of Landscape Architecture was an enriching experience that began with a colleague Wendy McWilliam, Senior Lecturer, Lincoln University who said, “you should do it.” Since I was a student at Lincoln University completing a Bachelor in Landscape Architecture many years ago, Dr Jacky Bowring was inspirational in her non-judgemental approach with students, and her professional energy to explore unknown territory often with an oblique angle, and always with a kind sense for humanity. With Jacky and Shannon Davis as supervisors their support took me on an adventurous path of study, which lead to the travel to Japan.

Many people in Japan were helpful through communication prior to the trip, and several became guides, without whom the case sites would not have been as well informed. Kohei Takahara Researcher at the Disaster Reduction Institution kindly offered to meet and act as my guide in Kobe and gave generously of his knowledge through email correspondence. Hosts at information centres in Japan and New Zealand who were passionately interested in the research thesis gave information keenly and must also be acknowledged.

The discussions with Jacky and Shannon throughout the process were invaluable and most enjoyable often segueing to more generalised musings of landscape architecture and literature. Their unwavering ability to see the bigger framework of the research when I was immersed in the details was excellent and the feedback chapter by chapter sharing their insights and knowledge was of great assistance. Thank you to Jacky and Shannon who taught me a compassionate way of viewing the world through the eyes of a landscape architect.

I owe thanks to Lincoln University for the provision of financial assistance in the form of a scholarship and a contribution to travel costs for the journey to Japan. This made the reduction of time spent in my professional career more manageable.

The warm encouragement and interest shown by family and friends spurred me on as I sifted through the mire. My husband Wayne, who traveled to Japan with me was a strength, and was interested in the varied course the jouney took, often waiting patiently as I spent hours at some sites. He will be relieved to have a companion return to a previous life.

Table of Contents

List of Figures

143

List of Tables

Chapter 1

Introduction

Memorials to natural disasters increased in number throughout the world in recent years from a range of events including floods, landslides, blizzards, wildfire, tsunamis, earthquakes and famine. There is a lack of examination of memorials to natural disasters and little research into what they provide for survivors and future generations. Scholarly literature discusses the process of creating a memorial and James E. Young in particular is key to the development of concepts of memorialisation.[1] Young provided advice on the appropriate design for a memorial in Berlin to commemorate the murdered Jews in Europe, and led the judging panel for the 9/11 memorial in New York. While the tragedies that Young explored in his memorial research were human-induced (genocide and terrorism), his work can be related to memorials to natural disaster. The process of establishing a memorial can be applied to both human inflicted disaster and natural disaster: a tragedy occurred, and the survivors and families wish to commemorate that loss. The history of memorials, the political and social memory and the human desire to memorialise are provided in the writing of Young, geographer, Karen E. Till's work on cities affected by violence and other scholars whose work examines memorials from a range of perspectives.[2]

There are many articles by the same scholars and others, but since the proposal for a memorial to acknowledge the atrocity of the murdered Jews of Europe the focus centred on the process of establishing a memorial, and then once built an examination of the design and performance of the memorial. An important example is Maya Lin's Vietnam Veterans Memorial in Washington DC, identified in the literature as a significant change in direction for memorial design. All this literature relates to human conflict. While there are no memorials to natural disasters on the scale and abstraction of the Memorial to the Murdered Jews of Europe, or the 9/11 Memorial Museum or raised such controversial discussion as the Vietnam Veterans Memorial, natural disaster memorials are numerous around the world. However, the literature focuses almost exclusively on memorials to human conflict, and examinations of memorials to natural disaster are rare.

---

[1] J. E. Young has written: The Texture of Memory, 1993, At Memory's Edge, 2000 The Stages of Memory, 2016, and contributed many articles, delivered recorded lectures and is a noted scholar on the process of establishing a memorial, and in particular Holocaust memorials and memory.

[2] Lewis Mumford, known for examination of cities and urban architecture; Kenneth E. Foote, academic with expertise in American and European landscape history; Karen E. Till, academic and scholar of cultural geography; Adrian Forty, academic and expert in architectural history. Performance of a memorial is examined by Quentin Stevens academic and writer of the place of memorials in the public realm and Karen A. Franck academic with a focus on memorials and public space.

A one year Master of Landscape Architecture limited the scope of research and some aspects have been lightly mentioned for example the meaning of culture in New Zealand and Japan. There is an opportunity for further research on the impact that differing cultures have on attitudes to death which may in turn be reflected in memorials.

1.1 Protective memorials

It may be assumed that all memorials are the same in terms of what they offer the nation and those affected, and therefore the design attributes and meaning are no different whether memorialising human conflict or natural disaster. Many of the more recent natural disaster memorials exhibit a message to survivors, that measures are taken to protect them, and future generations from tragedy in future disasters that are certain to reoccur. Protective structures in the landscape, and education of how to survive when a disaster occurs are different from the memorials to lives lost in times of political conflict when differences may be resolved, or the threat of tragedy is not imminent. In the case of the 2004 Indian Ocean Earthquake and Tsunami that killed 230,00 people, several of the countries affected built places of symbolic reminders and acknowledgement of the disaster. Banda Aceh, Indonesia, built the Aceh Tsunami Museum, a structure designed to resist future earthquakes and tsunami, and its green roof serves as an evacuation area and commemoration space. Following the design of a traditional house the ground floor is open to allow the flood to move through minimizing the risk of damage to the building.[3] Two four-level glass buildings sit adjacent to each other at the Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution in Kobe, Japan (Figure 1.1, Figure 1.2). As a research centre for natural disasters it also provides education and information about the 1995 Great Hanshin earthquake. Nearby is the recently built Red Cross Emergency Hospital equipped with a helipad on the roof to transport the injured when the next disaster strikes.

[3] (Urbane, 2017)

Figure 1.1. The Disaster Reduction Institution, Kobe, Japan. Photo by Louise Bailey, 2019

Figure 1.2. Approaching the Disaster Reduction Institution from the street. Photo by Louise Bailey, 2019

Infrastructure severely damaged in earthquakes and tsunami in Japan and New Zealand serve as memorials, and spaces for education and reflection are included in their design. Jacky Bowring, a landscape architecture academic in New Zealand who specialises in memory and memorials and Simon Swaffield a landscape architecture academic in New Zealand who writes on theory of landscape architecture, argue that natural disaster memorials can take forms from objects of art

to infrastructure and planning changes for future proofing.[4] This may include sculptures, ruins, memorial parks and museums, centres for education and preparedness as well as community driven initiatives. Bowring and Swaffield state that, "Abrupt and unexpected changes in the landscape can result in strange new configurations as earthquakes or tsunamis transform seemingly immutable landscape elements. This creates opportunities to strategically curate change. To mark and re-present the process and experience of landscape transformation—recording the past while shaping a new future."[5] Rikuzentakata in Japan recently built a museum and memorial in a newly constructed levee inside the 12.5-metre-high protective sea wall. These types of memorial deserve examination to observe the differences between all memorial types with the aim of understanding globally how memorials, while providing places of remembrance for traumatised communities, can change the future and provide safety for societies that are repeatedly ravaged by nature.

1.2 How did Japan and New Zealand memorialise in 2011?

Japan and New Zealand are geologically pre-disposed to earthquakes and Japan to devastating tsunamis with a lesser risk of tsunami in New Zealand. A catastrophic earthquake of magnitude 6.3 struck Christchurch, New Zealand on the 22nd February 2011 killing 185 people and causing massive destruction within the central city. In its young life of approximately 165 years the city of Christchurch had not experienced such a devastating disaster. The nation was stunned and the people of Christchurch were shocked into disbelief that this could happen in their city. As people's lives returned to a normality and the city began to regenerate and rebuild for the future the idea of a memorial appeared as a way to remember the people whose lives were cut short, and a place for the nation to gather in remembrance of the tragedy that affected many people.

In the same month as the New Zealand earthquake, Japan experienced a magnitude 9.0 undersea earthquake that was followed by a tsunami of unpredicted height and enormity breaching sea walls and causing widespread devastation along the Pacific coast of Tōhoku north of Tokyo. Although the immediate clean-up of debris in Japan appeared to be making fast progress the reality for many was not the same. While people grappled with their daily lives in both countries many ephemeral and temporary memorials appeared when there was no official place of commemoration and remembrance. Sculptor Peter Majendie's 185 Empty White Chairs is an eclectic collection of chairs painted white, each to represent a life lost in the Christchurch earthquake. Intended as a temporary

[4] (Bowring & Swaffield, 2013) p.96-104
[5] (Bowring & Swaffield, 2013) p.96-104

installation for one week marking the first anniversary of the earthquake, it moved sites, and through its popularity eight years after the earthquake was proposed as a permanent memorial. In Rikuzentakata a lone pine tree that survived when every tree in the forest around it was swept away became an instant place for people to gather and commemorate.

The need for a place of remembrance was evident within the first year of the disasters in both countries. In Christchurch, February 2017 on the 6th anniversary of the earthquake, the permanent memorial Oi Manawa Canterbury Earthquake National Memorial was opened with a service. Many memorials in Japan are established in response to natural disasters, and some emerging from the 2011 tsunami are still to be completed. The Miracle Pine at Rikuzentakata, which was initially a temporary memorial, is preserved and now a permanent memorial. Other structures and strategies that are not places for commemoration or remembrance serve as markers of a natural disaster and in a sense, may trigger thoughts of remembrance and act as a memorial. Reassurance of safety and being prepared for future events is a high priority in Japan with an emphasis on educating the people so that they know what to do next time to keep safe. Many of the structures and strategies are visible in the landscape and are a constant reminder that danger is imminent.

This thesis questions why or why we do not memorialise; how natural disasters are memorialised; how the site and location impacts on the memorial; the role of landscape architecture in the design of memorials and the message a memorial conveys to aid in preparedness for future events. What can be learned from the memorials that are now prevalent to prevent the devastation for future generations?

Taking this context into account my research question is:

Why memorials matter. What are the differences between Japan and New Zealand in how each country memorialises natural disasters? How can memorials perform other roles than simply remembering?

1.3 A brief background to natural disasters

To help contextualise the countries of interest, a brief account of their tragedy is offered. The area of study is the Pacific Plate on which Japan and New Zealand sit. Figure 1.3 illustrates the scale of loss of lives through natural disasters since 1900. The 1932 Great Floods of China caused 2.5 million deaths, and the 1976 Tangshan Earthquake 655,000 deaths. Of natural disasters in the 21st century the 2004 Indian Ocean Earthquake and Tsunami centred off the coast of Sumatra, Indonesia killed 230,00 people. Data collected by James Daniell, geophysicist, geologist and engineer, reveals

that over 8 million deaths are recorded, “since 1900 for earthquake, flood, storm, volcano and bushfires (without counting deaths due to long term effects or drought/famine).”[6] He also states that since 1960 earthquakes are responsible for the highest death percentage in relation to all deaths by natural disaster.[7]

Japan is a world leader in education and strategies to prevent or at least reduce the amount of destruction from future natural disasters, and like New Zealand, sits on the Pacific Plate which along with the interrelated seas is by far the most earthquake and tsunami prone area in the world (Figure 1.4).[8] With almost 20% of the world’s earthquakes of magnitude 6 and greater occurring in and around Japan, and the threat of tsunami, landslides, floods and fire places the country in a vulnerable position subject to the whims of natural disasters.[9]

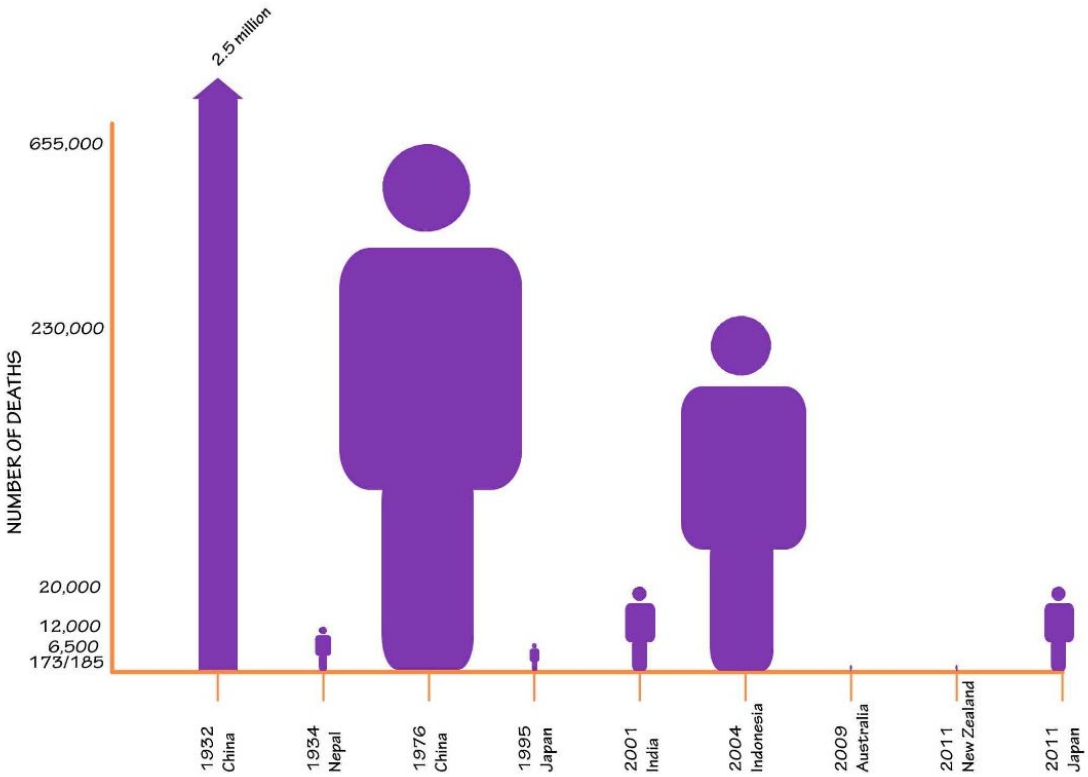


Figure 1.3. Graph indicating the most destructive natural disasters since 1900. Image by Louise Bailey, 2020

[6] (Karlsruhe Institute of Technology, 2016)
[7] (Karlsruhe Institute of Technology, 2016)
[8] (Santiago-Fandiño & Mas, 2018)
[9] (Cabinet Office Japan, 2015) p.13

Figure 1.4. The Ring of Fire circling the Pacific Ocean. The coastlines run parallel to the tectonic plate boundaries, where many earthquakes originate and are often followed by tsunamis. Image: "File:Ceinture de feu du Pacifique.svg" by Rémih is licensed under CC BY-SA 3.0 Adapted by Louise Bailey

Figure 1.5. The centuries-old tablet (highlighted) on the roadside in Aneyoshi. Image by Google Earth Pro.

Past civilizations passed warnings and explantations of these disasters by way of folklore and markers that told the tale of devastation, hoping that furture generations would heed the warnings and observe the knowledge handed to them. In 2004 when a magnitude 9.1 earthquake off the coast of Sumatra set off a tsunami that reached the coastline of Thailand, a legend that warns, "when tides recede far and fast then a man-eating wave will soon head their way,"[10] was held in the minds of the people and many did run far and fast. Japan history of ancient warnings is similar. Approximately 200 ancient stones dotted along the coastline, some more than 600 years old, warn of building beyond these markers, as tsunamis had reached that point many times in the past (Figure 1.5). One of the earliest recorded tsunmi occurred in 1896 killing at least 22,000 people.[11] One stone slab warned,

> High dwellings are the peace and harmony of our descendants. Remember the calamity of the great tsunamis. Do not build any homes below this point.[12]

As coastal towns became a popular place to live and populations swelled, these warnings in many cases were forgotten, and development beyond the demarcation point grew. However, in 2011 in the small town of Aneyoshi the people remembered the warning and evacuated to higher ground, surviving after a sea-wall failed. Fumihiko Imamura, a professor in disaster planning at Tohoku University in Sendai, believes that "It takes about three generations for people to forget. Those that experience the disaster themselves pass it on to their children and their grandchildren, but then the memory fades."[13] Memorials since these times are growing in scale and importance and act as a reminder that the force of nature defies human habitation.

Japan and New Zealand in recent years suffered tragic loss of life, infrastructure and property. Approximately 100,000 homes were destroyed in Christchurch leaving many people displaced,[14] and the central city lost some 50% of buildings.[15] Kaikōura, New Zealand was struck by a magnitude 7.8 earthquake in November 2016 damaging homes and roading. Repairs to the road, State Highway 1, are almost complete after three years of reconstruction. State Highway 1 is the lifeline of the South Island linking Picton's ferry terminal through Kaikōura to Christchurch and further south. Kaikōura relies on this through traffic and tourism for its economy and the small coastal town struggled with the closure of the road for 13 months.

---

[10] (McKie, 2005)
[11] (Lewis, 2015)
[12] (Alabaster, 2011)
[13](Alabaster, 2011)
[14] (University of Canterbury)
[15] (Bowring & Swaffield, 2013)

These four natural disasters alone in Japan and New Zealand generated a plethora of memorials in a range of forms from places for people to visit and remember, to museums, high protective walls, roads and parks. James Young, who was engaged to convene the panel of judges for the 9/11 Memorial in New York, when speaking of atrocities committed by people states that, "we must confront our past," and memorials and the process of memorial making "help[s] with the healing process."[16] In this thesis I follow the approach of James Young when he discusses Friedrich Nietzsche, German philosopher, and Lewis Mumford, an American philosopher, and their disdain of the monument, "that pretends to be august and monumental." Mumford continues, "The notion of a modern monument is veritably a contradiction in terms: if it is a monument it is not modern, and if it is modern, it cannot be a monument."[17] The memorials studied in this thesis resonate with Young' concept of "memory-sites" that may or may not have the ability to morph as society relates to the memorial over time and "may be a day, a conference, or a space, but it need not be a monument. A monument on the other hand, is always a kind of memorial."[18]

[16] (James E Young, 2019)
[17] (Mumford, 1938) p.439
[18] (James E Young, 1993) p.4

Chapter 2

Literature Review

In memorial literature memory and memorials to cultural atrocities and tragedies are discussed at length, for example through the work of James Young, Jacky Bowring, Karen Till, Quentin Stevens, SueAnne Ware and Shanti Sumartojo to name a few but little academic attention is given with respect to memorials created in response to natural disasters. Even less is written about the importance of memorials in their ability to provide education in the preparedness for disasters. Where practicable, discussions around aspects that relate to human induced violence are applied in this thesis considering how those findings might apply or be relevant to disasters caused by nature. Information portrayed in museums to human conflict inform the visitor of the details of a war or lives lost through political, religious or cultural differences. However, these events may not reoccur with the same certainty as a natural disaster. The intentions and meanings of memorials may differ but in the case of a memorial to natural disaster there is a clear message that is common to all. To reduce the severity of the number of deaths and level of destruction, education and preparedness for future events is a key aim of memorials and museums.[19]

When cultural conflict results in death, blame may be apportioned to an enemy and a battle won may be credited to a leader or political regime. When a natural disaster kills, none of these factors apply. There is no one to blame and no one to credit although many citizens may be acknowledged in the recovery process for their dedicated, selfless assistance to others. Memorials play a part in that recovery process providing places of contemplation and commemoration where people can visit alone or gather as a community that in some form shares the memory of the tragedy. The memorials discussed in this chapter are almost all recognising cultural disasters and seek to convey a message that this pain and tragedy should be avoided at all costs in the future. One of the aims of the 9/11 Memorial was to become "a symbol of [New York's] resiliency." …and to "to repair both the wounded city-scape and our wounded souls, to provide a place for contemplation of both loss and new life."[20] Memorials are often erected in public places by governments seeking to uphold a solidarity of common values, and act as a reminder to the people of their own vulnerability and mortality. In past times memorials were commissioned and built without any consultation with the populace, but in the more recent memorials discussed in this chapter, communities directly and indirectly affected by the tragedies were engaged in the design process. James Young writes

[19] (Nakasu, Ono, & Pothisiri, 2018)
[20] (James E Young, 2016) Loc.952

extensively on the need to discuss, debate and consult during the process of designing a memorial, and claims that the tension through the process is as important as the realised monument.[21]

2.1 Memory and the need to memorialise

> But who can remember pain, once it's over? All that remains of it is a shadow, not in the mind even, in the flesh. Pain marks you, but too deep to see. Out of sight, out of mind.[22]

In *The Handmaid's Tale*, Margaret Atwood, novelist, describes the pain that people suffer through life, although hers is a somewhat apocalyptic, dystopian view of life. Whether the pain be from childbirth as in this story, or from the pain suffered in war or a natural disaster, the loss, absence or emptiness felt is deep, and the compassion and empathy shown by others helps in carrying that pain.

The pain carried through tragedy can be swept out of view, and "there is an overriding desire to clean up, repair basic infrastructure, and restore both public and private cash flows."[23] However people do not forget, and the memory lingers. Lewis Mumford considers the "human desire to perpetuate themselves," not only through reproduction but through "social heritage through memory, imitation, and the written record."[24] In memorialising, others argue that the monument, by existing as an external object, supplants the need for internal reflection and becomes a place that is visited for remembrance at convenient times, placing the obligation of memory outside of oneself.[25] Although in some cynical views the memorial is loaded with negativity, others proclaim the need for governments and communities to provide places of commemoration for societies to forge a common past, one in which they share in the experience of tragedies that were faced by their forebears.[26] The knowledge of this common past, the display of a national identity and a sharing in loss are evident in the human desire to memorialise through the many memorials world-wide that offer these themes.

James Young clarifies that although these communities may only share "vicariously" it may be simply the act of sharing the memory together that forms the memory, "once ritualized, remembering together becomes an event in itself that is to be shared and remembered."[27] Young quotes Sigfried

---

[21] (James E Young (2016) Loc.403
[22] (Atwood, 2016) p.125
[23] (Bowring & Swaffield, 2013)
[24] (Mumford, 1938) Chapter 6
[25] (James E Young, 1993) p.5
[26] (James E Young, 1993) p.6
[27] (James E Young, 1993) p.7

Giedion in relation to the human need and desire to remember: “Every period has the impulse to create symbols in the form of monuments.”[28] Young makes the point that, “the more fragmented and heterogeneous societies become, it seems, the stronger their need to unify wholly disparate experiences and memories with the common meaning seemingly created in common spaces.”[29] He states further that, "the contemporary monument attempts to assign a singular architectonic form to unify disparate and competing memories.” He refers to a shift away from a national “collective memory” to what he calls a nation’s “collected memory”,[30] a collection of individual memories. “Here we recognise that we never really shared each other’s actual memory of past or even recent events, but that in sharing common spaces in which we collect our disparate and competing memories, we find common (perhaps even a national) understanding of widely disparate experiences and our very reason for recalling them.”[31] Young believes that the common space of a monument or memorial asks people in a “populace to frame diverse pasts and experiences in common spaces.” However, the result of such memorials is the “illusion of a common memory.”[32] He is referring to tragedies brought about by dictatorial regimes, where lives were lost through the ideals of a group. Instead of allowing memorials to retain a rigidity and certainty of history he proposes that the memorial might be “regarded as a never-to-be-completed process, animated (not disabled) by the forces of history bringing it into being.”[33]

For many who experience a natural disaster there is no dictatorial ideal, no common enemy, and the devastation happens instantly. Contemporary societies understand the forces of nature and cannot assign blame to a mythical creature. The experience of such disasters is commonly shared and although there are variations of the individual experience there is no “illusion of a common memory.” The horrors, loss and grief are understood by those who were there at the time of the disaster and by those who in some way empathise with that pain and tragedy suffered by others. In a forum held for the World Trade Center Site Memorial, Young was struck by the empathy he felt for the victims’ families of the 9/11 Pentagon attack and the losses they had incurred. When consulting with his therapist he was told that “in any new loss, we remember every other loss we have ever known.”[34]

---

[28] (James E Young, 2016) Introduction Loc.328
[29] (James E Young, 2016) Introduction Loc.355
[30] (James E Young, 2016) Loc.364
[31] (James E Young, 2016) Loc.373
[32] (James E Young, 2016) Loc.355
[33] (James E Young, 2016) Loc.383
[34] (James E Young, 2016) Loc.815

Karen Till maintains that the memorial presents “conflicting social desires to remember and to forget.”[35] Concepts which Adrian Forty argues are inextricably linked_ one cannot exist without the other. He states that “since Renaissance times objects have come to stand for memory.”[36] In reference to the Holocaust he declares that not to remember, and thereby not to prevent these disasters from reoccurring, would risk a repeat of past undesirable pain. In support of this Young quotes Sigfried Giedion, “This demand for monumentality cannot, in the long run be suppressed. It will find an outlet at all costs.”[37] Forty concludes that "we live in a world that is obsessed with memory,"[38] and that generally we berate ourselves for not having a better memory or more of it and so we collect places that store memories to be accessed when we want them such as museums and monuments.

While remembering serves a purpose these memories need to soften and fade or take on memory decay to reduce a level of pain that individuals cannot sustain in an everyday life. In the view of Young, in discussing the work of ethnographer and social theorist Marc Augé, not to do this would “disable life.” He says that in this view “…the value of life in its quotidian unfolding and the meaning we find in such life are animated by a constant, fragile calculus of remembering and forgetting, a constant tug and pull between memory and oblivion, each an inverted trace of the other.”[39] In conclusion he quotes from Augé, “We must forget in order to remain present, forget in order not to die, forget in order to remain faithful.”[40] Faithful to everyday life to remain mindful and yet not worn down by guilt or shame. Forty says that to co-exist in a political society, we must afford an amnesty of past wrongs, so there must be a “public forgetting”.[41] This enables people to live peacefully with their differences in times of conflict for example post-war Europe.

At the time of writing, the bush fires in Australia burn and are wreaking havoc and tragedy across the country. Smoke carried across the Tasman sea and blanketed New Zealand reminding us of how most Australians are affected every day. In experience of working with communities in Australia to memorialise the St Andrews bushfires of 2009, known as Black Saturday, Sue-Anne Ware, Head of School of Architecture and Built Environment, University of Newcastle Australia, strongly advocates in a time of a “plethora of commemorative spaces” for memorials to have “agency beyond the particular event or tragedy itself: they need to engage in the debate of policy makers and future

[35] (Karen E. Till, 2005) p.9
[36] (Forty, 2015)
[37] (James E Young, 2016) Loc.328 Intro
[38] (Forty, 2015) 37 minutes
[39] (James E Young, 2016) Loc.392
[40] (James E Young, 2016) Loc.392
[41] (Forty, 2015) 41 minutes

leaders about the events being memorialised but also comment on future possible events. Memorials and their design involve complex political, social and cultural processes of commemoration."[42] The political debate over the future of Australia's economic resources, in particular mining, is being observed across the globe as the government debates the realities of climate change. At the World Economic forum in Davos the Australian Finance Minister, Mathias Cormann said that Australia would "meet and beat" its Kyoto and Paris agreement carbon emission targets. In defence of Australia's coal exports, he claimed that the world-wide demand for coal "if not met by cleaner Australian coal [it] will be met by comparatively dirtier coal from other sources and the world environment will be worse off."[43] Although not a denial of climate change many Australians are sceptical of this view. Australia is the second biggest exporter of coal behind Indonesia and by 2030 their emissions will be 16% lower than 2005 but that is far from the target of net zero emissions.[44] Although strategies were put in place by the Australasian Fire and Emergency Service Authorities Council Limited and other agencies in response to past significant fires these are not stringent enough nor are lessons learned to protect lives and property from the ravages of fire across Australia. The Australian people are calling for a change in the government's approach to the catastrophic environmental and health effects of climate change and a reduction in emissions.[45]

These realities are visible and cannot be ignored. Janet Donohoe, writer on the phenomenology of memorials, proposes that monuments "must keep us mindful of our own death and must remind us of an open relationship to the world that resists presuppositions or the imposition of meaning."[46] She considers the Vietnam Veterans Memorial, designed by Maya Lin, 1982, as a monument that acknowledges the death of the individual rather than the collective or the ideals of the state by placing all the names of the those who died on the wall of black marble that slices through the earth. In referring to the depth of pain felt through tragedy, Lin commented, "I imagined taking a knife and cutting into the earth, opening it up, an initial violence that in time would heal."[47] Her memorial proved to be a pilgrimage site for those who served in the war and those who had loved ones who fought in Vietnam. It became a sacred place of healing and reverence as she intended.[48]

In imparting history and the memory of tragic events to future generations, the 'sunken' fountain, a 12-metre-high water fountain, the Ashcrott-Brunnen, serves as a case study of a new generation of

[42] (Ware, 2015) p.44
[43] (van Leeuwen, 2020)
[44] (Goodman, 2020)
[45] (BBC News, 2019)
[46] (Donohoe, 2002) p.237
[47] (Lin, 2000) p.4:10
[48] (Klein, 2016)

artists with a different approach to memorials in Germany. Young explains, “They are heirs to a double-edged post-war legacy: a deep distrust of monumental forms in light of their systematic exploitation by the Nazis and a profound desire to distinguish their generation from that of the killers through memory.”[49] The original fountain was donated to the city of Kessel, by a Jewish entrepreneur Sigmund Ashcrott. It was demolished by the Nazis two years prior to the first transportation of Jews from the town in 1941, all of whom were murdered. As the memory of the cause of the destruction of the fountain began to fade with the ageing population, the memorial was reconstructed in negative form in 1984, and buried below ground with its tip 12 metres down.[50] Through a metal grate the sound and depth of rushing water can be heard descending into the void. In Young’s translation of Rathaus-Platz-Wunde he quotes the artist designer Horst Hoheisel:

> I have designed the new fountain as a mirror image of the old one, sunk beneath the old place, in order to rescue the history of this place as a wound and as an open question, to penetrate the consciousness of the Kassel citizens-so that such things never happen again.[51]

Stories passed from one generation to the next are distinguished from memory by the time passed since the trauma experienced by previous generations. It allows imaginative investment and creation as they move through generations. Marita Sturken writes that, “Postmemory characterizes the experience of those who grow up dominated by narratives that preceded their birth, whose own belated stories are evacuated by the stories of the previous generation shaped by traumatic events that can be neither understood nor recreated.”[52] While the term ”postmemory’” stemmed from discussion on the Holocaust, the concept of telling the past, and passing knowledge through non-traditional forms of relating history such as visual arts, family photographs, and autobiographical material is applied to the transfer of knowledge through natural disasters. Museums in Japan and Christchurch screen documentaries of personal stories that are shown to younger generations and visitors who are too young to understand the event, or others with no personal connection to the place. New Zealand is familiar with the ‘pilgrimage’ many take to Gallipoli, Turkey, where many young New Zealand and Australian men died along with a much greater number of Ottoman soldiers. Visiting the place where their grandfather or great grandfather died, returning to a place

[49] (James E. Young, 1992) p.271
[50] (James E. Young, 1992) p. 288
[51] (James E. Young, 1992) p.288 translated from, Horst Hoheisel, “Rathaus-Platz-Wunde,” in *Aschrott-Brunnen: Offene Wunde der Stadtgeschichte* (Kassel, 1989), p. 7
[52] (Sturken, 1999) 10-12

that is known to them through stories told through family photographs, family stories or documentaries bridging their "experiential distance."[53]

Ancient stones in Japan were the bearers of warnings to heed the experiences of those who lived through a past tragedy. The makers of the stones wanted to protect future generations from the loss that they had suffered and in some cases were effective in passing on that knowledge. Not all memorials act as a warning as their purpose is multidimensional, but museums in many countries place a strong emphasis on the lessons to be learned from such tragedies. Museums built in response to natural disasters not only provide knowledge of what happened but convey a strong message to future generations of what to do when the next disaster strikes, to be prepared and respond in a way that through research is proven to protect lives and prevent loss. In this sense there is not only a desire to remember, there is a need to enforce a message of preparedness.

2.2 Places of Memory

Three places of memorialising extensively studied are Berlin's Memorial to the Murdered Jews of Europe, designed by architect Peter Eisenman, 2005, (Figure 2.1, Figure 2.4); the Vietnam Veterans memorial in Washington DC, designed by Maya Lin, 1982, (Figure 2.2); and the National September 11 Memorial at Ground Zero in New York City, designed by Michael Arad and Peter Walker, 2014, (Figure 2.3). In different ways they serve as a basis for study in this thesis and will be called upon for comaprative analysis from extensive scholarly literature. Although they are not memorials to natural disasters their examination provides useful insight.

Karen Till writes that, "*Places of memory* are created by individuals and social groups to give a shape to felt absences, fears, and desires that haunt contemporary society."[54] The concept of "ghosts" and "haunting" are terms used by Till to describe the absences left following a disaster. Place or memorial may trigger emotions from past experiences of anger, guilt, shame, sadness, longing and unease.[55] Some may say that triggering these emotions is the role of the memorial and that a tension between site and memorial makes the visitor experience a range of emotions rather than a benign site that is balanced and pleasing.[56] Young observes, we must remember "absence with absence, loss with loss, emptiness with emptiness, and destruction with destruction. … All this cannot be replaced with a beautuful thing."[57] Many of the 'ghosts' Till refers to can be found at

[53] (Karen E. Till, 2005) p.15
[54] (Karen E. Till, 2005) p.9
[55] (Karen E. Till, 2005) p.9
[56] (James E Young, 1993) p.7
[57] (James E Young, 2019)

sites visited in Christchurch and Japan where disaster takes away the 'smooth utopias' and replaces them with a stage of the future.[58] These sites will be discussed in detail in the Chapter 5, but in the context of places of memory the Japanese towns that were completely obliterated in the tsunami of 2011 are surely a stage of the future where little of the past remains and the strength of the future resilience to disaster is proclaimed in the great dams and levees that cut the newly built towns off from the once enjoyed coastline.

Figure 2.1. Memorial to the Murdered Jews of Europe, Berlin. Photo by Lizzy Bailey, 2015

[58] (Karen E. Till, 2005) p.5

Figure 2.2. Maya Lin, Vietnam Veterans Memorial (1982), a pilgrimage site, Washington, USA. Image: "The Vietnam Veterans Memorial [03]" by SchuminWeb is licensed under CC BY-SA 2.0

Figure 2.3. National September 11 Memorial, New York, where the names of victims are inscribed on the perimeter. Photo by Louise Bailey 2017.

Figure 2.4. Memorial to the Murdered Jews of Europe, Berlin. Photo by Lizzy Bailey, 2015

2.2.1 Approach to establishing a memorial

The approach to the establishing of a memorial could be categorised into three types. Memorials that are purpose made, those that are remodelled or repurposed from an existing place, and unaltered fragments that are left behind following a disaster. Fragments require some explanation as they are not as easily defined. Bowring and Swaffield consider that in the landscape we are able to grapple with the "vastness of time through the presence of relics and ruins."[59] It may be easy to recall images of well-known ruins such as the Roman Ruins in Rome, and the Acropolis in Athens which hold fascination of times in the past however, new ruins are "distressing and unsettling"[60] as they remind the visitor of the fragility of the human and the reality of life and death. Given the patina of time and the fading of immediate memories ruins take on a form of beauty. The ruin in an "intermediate location between culture and nature" in-between times of past and present, in its partially deconstructed state allows the visitor to imagine the missing pieces making the scene or building whole again.[61] Bowring suggests that, "Delicate, yet persisting in time and space, fragments, ruins, as pieces of a whole, are suspended within the ambivalence of melancholy."[62] Yet these pieces Bowring and Swaffield claim, open possibilities, and items that might otherwise accumulate in museums such as the Vatican are exhibited in their real place of origin and at the site of the devastation. Landscapes altered by natural disaster provide an opportunity to "strategically curate change, to mark and re-present the process and experience of landscape transformation-recording the past while shaping a new future."[63]

Having considered the approach of establishing a memorial leads to the question of how memorials respond physically in the space they occupy. Classifying the physical characteristics of a memorial into a spatial arrangement brings forth considerations of object/field, abstract/figurative, Inside/outside, distinct/obscure and context which are explored in the following sections.

2.2.2 Object / field

Rosalind Krauss, an American art critic and art theorist with expertise in the theory of object and field, placed the object / sculpture / (monument) as isolated from either landscape or buildings; it stands alone. It is neither landscape nor architecture and, "one found in the early sixties that sculpture had entered a categorical no-man's-land: it was what was on or in front of a building that

[59] (Bowring, 2013)
[60] (Bowring & Swaffield, 2013)
[61] (Steinmetz, 2008) p.232
[62] (Bowring, 2017) p.109
[63] (Bowring & Swaffield, 2013)

was not the building, or what was in the landscape that was not the landscape (Figure 2.5)."[64] Krauss also places the modernist period of sculpture/art in a state of "loss of site" where the object is in a "kind of sitelessness, or homelessness, an absolute loss of place… producing the monument as abstraction." Acting as a "pure marker or base, functionally placeless and largely self-referential."[65]

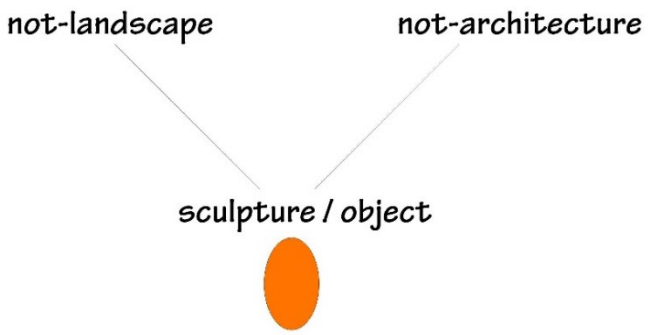


Figure 2.5. Diagram of the "combination of exclusions". Diagram by Louise Bailey, from R. Krauss.

The consideration of the more complex thinking of the object, evolved into the inclusion of architecture and landscape in an inter-relationship where one is not exclusive to the other. "*Sculpture* is rather only one term on the periphery of a field in which there are other, differently structured possibilities. And one has thereby gained the "permission" to think these other forms."[66] In discussion of Krauss and her article "Sculpture in the Expanded Field," Stevens confirms that the 1960s was the beginning of an expansion of the sculpture into the realm of architecture and landscape, thus allowing the object to become the field.[67] In following this line of thought it would imply that memorials built since the 1960s are more open to interaction with landscape and people on multiple levels and are ingrained in the fabric of everyday life. Stevens relates the absence of symbolism at an abstract memorial rather than sculpture as art as, "problematic and controversial when abstract designs are meant to commemorate important, highly emotional events for a broad public in an outdoor setting."[68]

[64] (Krauss, 1979)
[65] (Krauss, 1979)
[66] Krauss, 1979 #43}
[67] (Stevens, 2009) p.159
[68] (Stevens, 2009) p.159

2.2.3 Figurative / abstract

Earlier than the 1960s and the transition from pure object into the expanded field, the memorial was typically figurative, sitting in a placeless or "homeless space".[69] The object, often a hero sitting on a horse, wielding a sword or gun, was sited majestically in a town square or major avenue, outside a museum and always in a prominent place. A clear distinction is made by Quentin Stevens, academic and writer on the history and performance of memorials, between the figurative and the abstract memorial by way of the Albert Memorial, Kensington Gardens, London, and the Memorial to the Murdered Jews of Europe. However, for the purpose of this thesis the distinction is made siting the Arc de Triomphe as the figurative object to make a clear distinction between the dates that these were established and therefore the change in societal attitudes to remembering national tragedies. The message conveyed in the arch is one of the power, and glory of the realm in victorious battle. Instigated by Napoleon l after his victory at the Battle of Austerlitz in 1805 in which thousands of men died in both the French and Russian armies.

Memorials commemorating lives lost through natural disasters were not prevalent in in earlier times and it could be postulated that had memorials been established they may have depicted the victims or the gods that were expected to protect the people, particularly in future events. They may also have offered symbolism as a form of resistance to the forces of nature and a sense of reinforcing the dignity and social unity of the civilisation. Prominent memorials, such as the Arc de Triumph, are not represented in memorials to natural disasters, although a site frozen in time since A.D. 79, as a result of a volcanic eruption, was discovered in Pompeii in the 18th Century and the excavated site performed the role of a significant memorial since its discovery.

Sited at the terminus of Avenue des Champs-Élysées and Place de la Concorde, the Arc de Triomphe, (Figure 2.6), holds a central position at the axis of twelve grand avenues where many triumphal marches have taken place including the German occupation of Paris in 1940. Rising from a circular plaza it appears as a monolithic structure firmly anchored to the ground and of monumental proportions 50 metres high and 45 metres wide. Of the four relief sculptures on the façade the more famous is La Marseilles, depicting citizens (men) being stirred to patriotism by Bellona, the Roman goddess of war. Names of the generals who fought in campaigns are listed on the internal walls of the structure and those who died in battle are acknowledged with their name underlined. The Arc de Triomphe, representing one man's triumphs, takes characteristics of grand imperialism and of distance of authority from the populace. Quentin Stevens, explains,

[69] (Krauss, 1979) p.34

> With "spectacular" public memorials … viewers' feelings are affected primarily through relatively passive, distant reception of, and reflection upon, visual representations: figural depictions of the victims and the tragic events, textual inscriptions and visual symbolism, including architectural motifs, which represent feelings and attitudes toward the victims and events being commemorated. Such symbolism usually offers clear, indisputable, reassuring versions of the past; sculpture and architecture are used rhetorically to reinforce existing social beliefs and enhance social unity.[70]

Figure 2.6. [Arc de Triomphe], photograph, [1941..1945]; (https://texashistory.unt.edu /ark:/67531/metapth476743/: accessed February 17, 2020), University of North Texas Libraries, The Portal to Texas History, https://texashistory.unt.edu; crediting The 12th Armored Division Memorial Museum. With permission.

The Memorial to the Murdered Jews of Europe, Stevens cites as "an intentional rejection of such traditional styles of memorial" and that this style is now widely accepted and sets a new norm.[71] Stevens concludes that, "The sculptural object has been taken down off its pedestal, scaled to the human body, multiplied, and spread around to form part of a complex landscape which visitors move over, into and through."[72] The Memorial to the Murdered Jews of Europe displays all those capabilities and is open to interpretation, experience, and a range of emotions and activities, as shown in Figure 2.7 of children leaping across the stelae. It is interesting to note that French architect Patterlini Benoit imagined an adaptation of the Arc de Triomphe whereby it is repurposed for the experience and use of contemporary society as shown in Figure 2.8, Figure 2.9.[73] As one of the most noted and visited attractions in Paris Benoit argues that this status "has removed it from the authentic cityscape that is used by everyday Parisians" and his proposal, while not denying its history, would "bring it into modernity."[74] A series of stacked glass boxes over one half of the object would function as a museum to French history, restaurant, café and art gallery that would be

[70] (Stevens, 2009) p.158
[71] (Stevens, 2009) p.159
[72] (Stevens, 2009) p.170
[73] (Lynch, 2016)
[74] (Lynch, 2016)

patronised by tourists and locals. This re-modelling of the Arc de Triomphe would pull it into a contemporary use where it is integrated into the everyday lives of Parisians reducing the impact of the figurative object but not exactly making it abstract either.

In a statement on the website for the Memorial to the Murdered Jews of Europe, Eisenman places this memorial in a contemporary context without the use of symbolism that was represented in traditional monuments and with an open agenda of interpretation from the visitor. They are free to choose their own direction without guidance of a way in or out, no goal, and to own their thoughts. There is no understanding to be sought, "because understanding is not possible"[75] for the visitor who is in a different time. Eisenman concludes that,

> the time of the monument, its duration from its upper to its lower end, is separate from the time of its experience. In this context, there is no nostalgia, no memory of the past, only the vivid memory of individual experience. Today we can only understand the past through its manifestation in the present.[76]

Figure 2.7. Children playing on the stellae. Image: "Memorial to the Murdered Jews of Europe, Berlin" by jaybergesen is licensed under CC BY 2.0

[75] (Stiftung Denkmel fur die ermordeten Juden Europas, 2019)
[76] (Stiftung Denkmel fur die ermordeten Juden Europas, 2019)

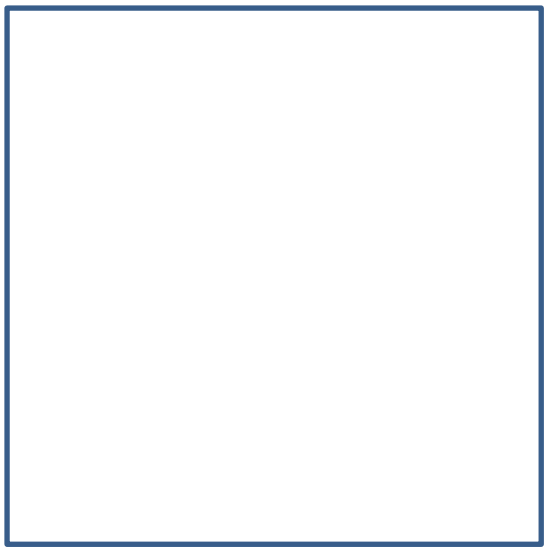


Figure 2.8. Patterlini Benoit re-purposing of the Arc de Triomphe. Image © Patterlini Benoit, archdaily https://www.archdaily.com/792338/this-speculative-project-imagines-a-mixed-use-building-wrapped-around-the-arc-de-triomphe. This image is not available due to Copyright.

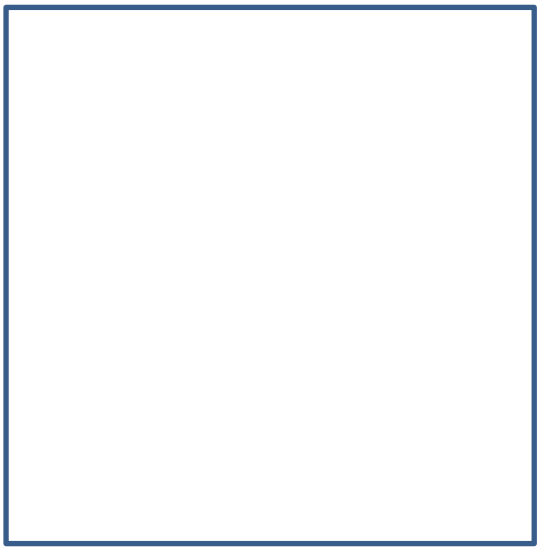


Figure 2.9. Patterlini Benoit re-purposing of the Arc de Triomphe. Image © Patterlini Benoit, archdaily https://www.archdaily.com/792338/this-speculative-project-imagines-a-mixed-use-building-wrapped-around-the-arc-de-triomphe. This image is not available due to Copyright.

2.2.4 Memorial Siting

As memorials are proposed the place or siting of that memorial is one of the major considerations. Location for the Memorial to the Murdered Jews of Europe was widely discussed as Till outlines, with many locations debated from those who believed it would be best placed in central Berlin in association with other historic buildings of significance in the southern Friedrichstadt, and those who sought an historic site linked to the "Gestapo Terrain" Kreuzberg District alongside the Wall where topographical layers of atrocities are found.[77] The result was a national memory district which contained the Memorial to the Murdered Jews in Europe; The Jewish Museum designed by Daniel Libeskind; and the Topography of Terror designed by Peter Zumthor. Some contested this site and raised the concern that the centralising of the memorials would shadow other significant historic

[77] (Karen E. Till, 2005) p. 82

sites such as Sachsenhausen Concentration Camp on the outskirts of Berlin.[78] As Till explains, "For second- and third-generation educators, historians, directors, and citizen initiatives, such authentic historic sites are places where future generations should bear witness and confront the histories and consequences" of a dictatorial regime.[79]

Siting memorials in older cities already congested with the built form provides an argument, according to Stevens, for placing them in parks such as "Hyde Park Corner and Battery Park, and to relatively undeveloped areas like waterfronts."[80] He further comments that, "These older cities express their history and meaning in many ways, without relying on self-consciously master-planned constellations of symbols."[81] This concern over congestion of memorials in urban space may not be relevant in places where tragedy clears space and this is very much the case in natural disasters through fire, earthquakes, and tsunami. The opened space provides opportunities to re-think the siting of memorials and rather than in-filling urban gaps a memorial may be sited within the context of other related museums and memorials or near the significant place of atrocities.

Such debates over the siting of memorials raises questions of the moral economics of (post) memory, authenticity and tourism. The siting of a memorial may or may not be implicit in the historical memory of the precise location, but whether the siting is of historic relevance, the site regardless, may become a place of memory. When discussing the historical relevance of a site the question of how a site becomes a place of memory becomes critical?

2.2.5 Memorial Place

Jeff Kelley, art critic, aptly makes the distinction between place and site:

> Places are what fill them [sites] out and make them work. Sites are like maps or mines, while places are the reservoirs of human content, like memory or gardens. …Places are held in sites by personal and common values, and by the maintenance of those values over time, as memory. As remembered, places are thus conserved … This conservation is at root psychological, and, in a social sense, memorial. But if places are held inside us, they are not solipisistic, since they can be held in common. At a given threshold, our commonly held places become communities …[82]

[78] (Karen E. Till, 2005) p.22
[79] (Karen E. Till, 2005) p.22
[80] (Stevens & Franck, 2015) p.218
[81] (Stevens & Franck, 2015) p.218
[82] (Kelley, 1994) p.142

Till further suggests that we absorb the place into our inner being and that although the place is held in common with others, we adopt it as our own. While Till's literature discusses tragedy in relation to violent atrocities, much of her work can be related to places affected by natural disasters. The landscape can provide a place of remembrance in a form that is less painful than literature, and visual images. It is open to interpretation and very often contains elements that are soothing and assist in healing emotional wounds.[83]

The memorial placed in a landscape allows the visitor to form a memory associated with that place. Many of the contemporary monuments have a strong visual presence and make no apology in the landscape for their place. The three memorials mentioned at the beginning of this section have a powerful impact in the space they inhabit. This presence, Young believes, puts the monument into a cognitive order that both orients and provides a context in which to navigate and mind-map the memorial in its surroundings. He maintains that often placing memorials in a cohesive location "maximises the opportunity for symbolic meaning."[84] Citing examples of monuments and memorials that command a clear presence in their location, Young lists The Statue of Liberty, New York, standing alone in a prominent position in the Hudson River, the U.S. Holocaust Memorial Museum on the Mall in Washington, D.C. and he would surely add to those the Memorial to the Murdered Jews of Europe, and the National September 11 Memorial in New York which were established after the writing of *The Texture of Memory.*[85] The location of the latter two memorials was hotly contested however, such discussion is part of the process of establishing a memorial. Young, and Till, believe that the process is vital and although often fraught with division and politics, working through the issues with government, designers, survivors, families of victims and the wider community allows for a better result, as ''no memorial means one thing to everybody."[86] Young believes that a positive solution brings people together in a single space that invites people to come in and share the same memory. It is an illusion that they share the same memory but a "positive illusion." In working with groups in the process of establishing a memorial, Young would propose the question, "how about all the disparate memorials being organised in a space that seems to unify their meaning? … The more heterogenous we become the more diverse we are."[87] The 9/11 disaster included victims from 92 different nationalities. The Canterbury Earthquake National Memorial

[83] (Karen E. Till, 2008) p.108; (K. E. Till & Kuusisto-Arponen, 2015) p.303
[84] (James E Young, 1993) p.8
[85] (James E Young, 1993) p.7
[86] (James E Young, 2019)12:50 minutes
[87] (James E Young, 2019) 33:00 minutes

included nationalities from 20 different countries and the names of the victims are inscribed on the memorial in both English and the deceased's first language.

While according to Young these cultural differences would ideally be accounted for in a memorial, allowing the memorial to provide the platform for a range of emotions would make space for the diversity of visitors to experience the memorial in their own way. In each case when advising on a proposed memorial Young asks the questions; "what is it hoped that this memorial will achieve? To what end politically; to what end economically; to what end aesthetically?[88] He further asks, "can we ever compensate and repair through a beautiful thing?"[89] The contemporary generation of artists is very resistant to applying redemptive means to a memorial. Memorials and museums are at risk of exhibiting a beautiful aesthetic with the distancing of the spectator. Martin Jay, historian who writes on the value of remembering disasters with integrity, in discussing the political nature of human conflict disasters concludes that it is the eye of the spectator that is "able to judge and weigh the merits of specific events and objects, the eye that ultimately provides the material for a process of discursive communication about wrecks that occurred in the past and the ones in the future that might perhaps be forestalled."[90] In this sense the spectator visiting a place of remembrance although experiencing the trauma vicariously holds the capacity to observe and understand the need to avoid future tragedies. He further qualifies with a warning that,

> only if aesthetic spectatorship declines the invitation to conflate itself entirely with the entertainment industry's cinema of attraction can it provide a possible alternative mode of relating to a world that threatens to dissolve the distinction between reality and simulacra entirely and make every experience vicarious, derivative, and ultimately hollow.[91]

Bowring in her book *Melancholy and the Landscape,* discusses a range of melancholic emotions and spaces that in ways assist with the confrontation of tragedy and the emotions that in the "cinema of attraction" are unwanted. "Many contemporary memorials are characterised by an overloading of information, an emblemisation of the 'data' associated with the tragedy – the numbers of dead, the volume of debris, the ages of victims, creating death 'datascapes.'[92] The relentless pursuit of happiness is fed by television and social media and the constant need for diets, and other self-improvement campaigns in a guise to make life happy and perfect. This desire to be euphorically in a happy state excludes the possibility for other emotions such as melancholy. "In this context, the

[88] (James E Young, 2019) 22:00 minutes
[89] (James E Young, 2019) 22:20 minutes
[90] (Jay, 2003) p.117
[91] (Jay, 2003) p.117
[92] (Bowring, 2017) p.7

contemporary designed landscape is characterised by a one-dimensional existential spectrum, lives become sanitised and emotionally aseptic."[93] In contrast to this limited experience of life, Bowring states that, "The landscape has a role in proffering places of escape, of re-building the capacity for contemplation."[94] Kenneth Foote, discusses the sanctification of a site clarifying that it is the site's ceremonial dedication to a particular event or tragedy that qualifies it as a sacred site.[95] Such places for contemplation may be sanctified, and "can often be recognised by their distinctive appearance in the landscape."[96] Having been sanctified he states that, "the site is transformed into a symbol intended to remind future generations of a virtue or sacrifice or to warn them of events to be avoided."[97] Foote's observation points to the potential for memorials to do much more than simply offer a place for remembering.

Foote lists five signs that make these places distinctive in the landscape termed "fields of care" where sanctified sites: "are often clearly bounded from the surrounding environment …, are usually carefully maintained for long periods of time …, [and] sanctification typically involves a change of ownership, often a transfer from private to public stewardship, … frequently attract continued ritual commemoration, … often attract additional and sometimes even unrelated monuments and memorials through a process of accretion."[98] It is the cause that people died for, Foote argues, that "spurs sanctification," and the message conveyed or interpretation of a planned memorial may trigger tensions of what that message should be, negative, positive or a "high moral principle or lesson in human conduct."[99] This approach is different for a memorial to a natural disaster as there is no one to be vilified, honoured as a hero or martyr and the monument "site [that] is transformed into a symbol intended to remind future generations of a virtue or sacrifice or to warn them of events to be avoided"[100] is not applicable. The memorial to a natural disaster may however be transformed into a symbol intended to remind future generations of events in which they need to be prepared.

Other places that are not strictly viewed as a memorial and are not sanctified sites are the altered landscapes that Foote terms "remedial landscapes,"[101] where preventative measures ensure future proofing to mitigate future loss of lives and damage to homes and infrastructure in the case of a

[93] (Bowring, 2017) p.5
[94] (Bowring, 2013) p.6
[95] (Foote, 2003) p.8
[96] (Foote, 2003) p.9
[97] (Foote, 2003) p.8
[98] (Foote, 2003) p.9
[99] (Foote, 2003) p.11
[100] (Foote, 2003) p.8
[101] (Foote, 2003) p.168

natural disaster. Building codes are revised, land deemed inappropriate for construction is re-zoned and fortifications in the form of dams, levees and raised roads are built. In smaller, less obvious, ways the landscape is affected by such disasters and evident in warning signs or at a point in a road where many accidents took lives and small white crosses gather described as "the most widespread and effective citizen-initiated safety campaigns ever to surface in New Zealand."[102]

Till advocates that "landscapes become central characters in stories that symbolize the past as well as the future," and that in "renarrating" the diverse memories that come together in a space of commemoration "their haunting imprints may enable people to enact their fear, hopes, and desires."[103] In Chapter 5, Findings, the discussion questions the capacity or not of places for contemplation that may allow these thoughts and emotions to unfold.

2.3 Interpretation

A level of understanding at a memorial may be visible from the form of the memorial and its significance in the space it occupies and its broader context, but many visitors expect layers of information providing a greater understanding of the lives lost and the tragedy that occurred. Naming victims can be a contentious issue in the planning stages of a memorial and in the emotional personal connection that the visitor makes with the victims. The AIDS quilt, a living memorial to the lives lost through AIDS, a collaborative patchwork piece was displayed in the National Mall in Washington, DC, in 1987 and again in 1992 and portions of it have travelled the world. Initiated as a form of activism to draw attention to the plight of AIDS victims, the individual panels grew to more than 50,000 displaying more than 105,000 names.[104] Rico Franses, art historian and writer on monumentality and proponent of placing names on memorials in his article *Monuments and Melancholia* challenges the concept of placing names on a memorial. He refers to 'stranger-memorials' where the visitor is not acquainted with the person whose name is listed on the memorial, consequently the name does not evoke association as it would if the name was known to the observer. "Names seem to have the ability to cover the entire breadth of a person's behaviour and character, as well as one's own interaction with them."[105] When the observer is not affiliated with the name "One cannot mourn (in the technical, psychoanalytic sense) persons to whom one has been introduced only after they have died."[106] The AIDS quilt in addition to the name of the person includes personal items (see Figure 2.10), revealing something about that person's life and

[102] (Ings & Fox, 2001)
[103] (Karen E. Till, 2005) p.68
[104] (Messman, 2019)
[105] (Franses, 2001) p.97
[106] (Franses, 2001) p.102

personality, “what they knew, what they treasured, what they touched,” and it is these additional objects Franses maintains, that require a greater emotional commitment which produces greater melancholia.[107]

Figure 2.10. An AIDS quilt depicting personal details of name and interest of the person who died. Image "AIDS Quilt, Miami, December 2000 006" by osseous is licensed under CC BY 2.0

Thiepval Memorial in France, (see Figure 2.11), designed by Sir Edwin Lutyens, is dedicated to the 72,318 missing British and South African soldiers who died in the slaughter at the Battle of the Somme 1916. The names of all the victims are inscribed on the walls of the memorial. A visitor centre and museum were opened in 2016 to mark the centenary of the battle, with information offered in French, English and German. Personal artefacts donated by families and loved ones, documents and letters are displayed on the walls of the museum and tell a personal story of the men whose bodies were not found or identified. Having stood for one hundred years as a monument alone the memory of the tragedy would fade, and the history and stories recreated in the museum would serve to keep the memory alive in future generations. Franses would agree that it is these personal items that connect the visitor to a life that was tragically cut short “making the stranger

[107] (Franses, 2001) p.102

into a melancholic griever,"[108] and that it is the personal items and not the names alone that provides "the visceral thrill of an alien death, and the subsequent wash of melancholia."[109]

Figure 2.11. Image: "Thiepval Memorial" by Andrew Coombes is licensed under CC BY-ND 2.0

The placing of names is a much-debated issue in the establishment of a memorial. Should the victims be grouped by nationality, or with the people who died in the same building or place, or in in their capacity in the job they were performing as in the case of firefighters in the 9/11 tragedy? Young recounts the comment of a deputy fire chief when the discussion was centred around hierarchy or grouping of names, on the proposed memorial, "Don't separate them any more than you would separate family members in a cemetery!"[110] "They should be remembered as part of the family of firefighters."[111]

To read names of victims on a memorial requires a close-up encounter with the memorial as the names cannot be read from a distance. Maya Lin chose a very small font for the names on the Vietnam Veterans Memorial to "create a very intimate reading in a very public space, the difference in intimacy between reading a billboard and reading a book."[112] Locating names within reach of visitors allows them to touch the names and for families bring them closer to a more private engagement with the memorial.[113] Michael Arad and Peter Walker, at the National September 11 Memorial made the names even more accessible to visitors by angling the stone edge towards the observer bringing the names into a comfortable viewing angle. Added to this, the stone is cooled in summer and warmed in winter, encouraging the touching of names.

---

[108] (Franses, 2001) p.102
[109] (Franses, 2001) p.104
[110] (James E Young, 2016) Loc.790
[111] (James E Young, 2016) Loc. 790
[112] (Lin, 2000) p.4-14
[113] (Stevens & Franck, 2015) p.26

2.4 The dark side of memorials

Thanatourism is a more accepted term by academics rather than dark tourism as it "reflects a wider spectrum of perceptions, attitudes and feelings towards tourism associated with the atrocities of conflict, disaster, misfortune and death, as these sites, attractions and destinations often include an element of positivity, endowment and empathy."[114] While it is not a key issue within this thesis, it is a topic that is probed in relation to commemorative sites and requires consideration. Museums that display artefacts of human bones and photographs of mutilated bodies and other disturbing scenes can be observed in many museums throughout the world, depicting tragedy and suffering. Shannon Davis, New Zealand landscape architecture academic and specialist in memorials of atrocities, and Jacky Bowring discuss the global commonality of violence in the context of The Holocaust, and genocide in Rwanda and Cambodia. "Attempting to squash any remnants of genocide ideology within the nation, the Rwandan government and the Aegis Trust were acutely conscious of creating a representational memorial that educated on the overall process of genocide, the facts and figures, the personal stories and narratives."[115]

Information provided at case study sites in Rwanda and Cambodia is accessed in "pre-understood Western frames." They state that the artefacts displayed, "cross traditional cultural and linguistic boundaries," and that "they connect the "human" self to site and context through the intrinsic reality of death and what it is to be human."[116] Through accessing the "human" at these memorial sites, Catherine Roberts, whose research places a focus on memory, identity and conflict, emphasises the learning that occurs through sites of conflict. Roberts asserts that in order to avoid negative contexts of voyeurism and depravity relationships between tourism, heritage, and education provide a "thoughtful philosophy of sightseeing."[117] There is a responsibility to learning and interpretation at these sites says Roberts and the "shared or universal heritage … offers deeper levels of engagement and openness to learning processes."[118] Without the learning opportunities these sites are open to "criticism within moral contexts."[119] Robert's acknowledges opportunities for memorials to go beyond the role of just remembering.

The word 'conflict' could be broadened in this context to include places of natural disaster when the inhabited world comes into conflict with natural systems. It is the learning aspect of memorial sites

[114] (Mandelartz, 2016) p.v
[115] (Davis & Bowring, 2011) p.385
[116] (Davis & Bowring, 2011) p.387
[117] (Stone, Hartmann, Seaton, Sharpley, & White, 2018) p.609
[118] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637 p.610
[119] (Stone et al., 2018) p.610

that emerges as a key finding of my research at Japanese memorials. As discussed in the Chapter 5 in the section on 'Messages,' the sites visited were explicit in the information placed in view of the visitor and although body parts were not displayed, video footage of the tsunami as it engulfed people, and property, and emotive graphics of the Kobe earthquake was shown to all ages.

Alex Coats and Shelagh Ferguson, New Zealand academic researchers in tourism, examined the tension between residents and visitors in Christchurch, New Zealand following the earthquakes, and their findings requested tour managers to restrict the taking of photographs by visitors in places that were still too raw for residents.[120] Richard Sharpley, academic in the United Kingdom with an interest in the sociology of tourism acknowledges that "morbid curiosity, voyeurism or *schadenfreude* may be a principal driver of tourism to certain dark sites."[121] In the context of 'holocaust tourism', "it is the ultimate rubbernecker's experience of passing by and gazing at someone else's tragedy."[122] It is perhaps a stretch to align the extreme horrors of the holocaust with 'rubbernecking' of the destroyed homes of people in Christchurch, but in theory the gazing at people's tragedy reduces tourism to the same behaviour. Coats and Ferguson concluded, "… inherent emotional tensions between residents of a disaster zone and subsequent visitors should always be aligned with unbiased interpretation that offers an opportunity for catharsis, acceptance, as well as grieving for a sense of loss of both people and place."[123]

Memorial museums of natural disasters display artefacts and images that may be depict an affected story and it is the message conveyed that is discussed in the next section on education.

2.5 Education

The literature relating to memorials' role in education emerged as a significant thread. Although not initially recognised as a focus for the research, the field work in Japan revealed that many memorial sites conveyed a strong message of needing to understand the forces of nature, and its impact on human lives, and being prepared for similar events that are certain to re-occur. Academic literature on the educative aspect of memorials is addressed under the discipline of dark tourism, and tourism and education at Holocaust museums, but the literature is scarce. No literature was found on education that takes place at natural disaster museums and memorials; therefore, the literature review again relies on sources of cultural tragedy. Memorials, and their often-associated museums

[120] (Coats & Ferguson, 2013) p.10-14
[121] (Sharpley & Stone, 2009) p.17
[122] (Rojek & Urry, 1997) p.52-74
[123] (Coats & Ferguson, 2013) p.10-14

termed "leisure-education hybrid"[124] are not written about in scholarly literature from a landscape perspective; how does the memorial and the museum relate spatially? Do they contribute to a unified message? What does each offer in visitor understanding of the tragedy that complements the memorial and the museum? These questions are not addressed in the literature on natural disasters. It seems appropriate to discuss Dark Tourism from the view that it may offer a uniting of people from a different perspective. Young argues that coming together at sites of remembrance allows a "populace to frame diverse pasts and experiences in common spaces."[125] Roberts explains that with the limited research into the educative potential of memorial tourism sites, "the moral and intellectual status of dark tourism sites and visitors is dependent on educational value that is unqualified outside formal learning realms."[126]

Philip Stone, a research leader, recognised for his interests in 'dark tourism', in discussing how humans face inevitable death, proposes that individuals call on experience of death that is often drawn from dark tourism travel in the search for meaning and a way of coping.[127] Further, Stone continues, "the increasingly socially acceptable gaze upon death and its reconceptualisation either for entertainment, education or memorial purposes offers both the individual and collective self a pragmatic confrontational mechanism to begin the process of neutralising the impact of mortality."[128] In the confrontation of death through the 'acceptable gaze' the neutralising that takes place through a continued sensitisation and sanitation of death, "ultimately results in a sanitisation of the subject area, creating a perceived immunity from death in addition to a growing acceptance that death will ultimately arrive."[129] For the visitor to a memorial of a cultural tragedy there may be a sense of security in knowing that the particular threat or tragedy that occurred could be prevented in the future and that they may not need to experience the same pain and suffering. Through the exposure to death at dark tourism sites in a socially acceptable environment, the sensitising and sanitising of death "allows individuals to view their own death as distant, unrelated to the dark tourism product which they consume, and with a hope that their own death will be a 'good' death."[130] From this observation the correlation could be made to memorial museums of natural disasters where information that is displayed, and engagement with interactive simulations, place

[124] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637. p.613
[125] (James E Young, 2016) Loc 355
[126] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637. p.613
[127] (Sharpley & Stone, 2009) p.33
[128] (Sharpley & Stone, 2009) p.33
[129] (Sharpley & Stone, 2009) p.33
[130] (Sharpley & Stone, 2009) p.34

the visitor in similar circumstances where they are confronted by the 'acceptable gaze' and yet, if they are prepared for a natural disaster there is hope that death may be avoided.

The distinction between the type of information that a visitor is exposed to that may be considered acceptable, and imagery that is verging on distasteful and morbid is made by Sharpley and Stone by the degree of 'darkness' on the spectrum light to dark. 'Lighter' shades they define as, "those commercial visitor attractions which trade on (re)created and (re)presented death and suffering," which they refer to as "dark fun factories,"[131] a place where the events are presented in a macabre way with a degree of the thrill of a fun fair with a high "scare factor."[132] Stone relates the performance of such places of "fun, fear and lighter side," he calls 'The Dungeons' where scenes of torture are re-enacted with actors and participating visitors, and in the case of the "Black Plague [the] exhibit portrays scenes of terror, loss of life, bereavement and graphic illustration of the effects of bubonic plague on realistic life-sized mannequin models in medieval environments."[133] In conclusion Stone states, that empathy was shown by many respondents in the study particularly in reaction to the Black Death exhibit, and their vulnerability to pain and torture inflicted by overriding powers in the past. He observed that, "while respondents recognised the evolution of society (for the better) and appreciated the nature of penal justice today, there were concerns that society could regress back to methods of punishment as represented in the Dungeon torture chambers."[134] Populations who experienced a natural disaster confront their vulnerability in the face of future disasters, and without literature to support the theory of the challenges of educating about natural disasters it could be assumed that people viewing similar material would respond in a similar way, that is, with empathy. This will be discussed further in Chapter 5, in the section on Interpretation and Emotions, in relation to the what information is displayed and how visitors respond at memorials in Japan and New Zealand.

Susan Sontag, writer and philosopher, in *Regarding the Pain of Others*, 2003, writes about the effect of photography in depicting the pain suffered by others. In discussing the depictions of war, she writes that, "to represent the war in words or in pictures requires a keen, unflinching detachment."[135] She further clarifies that photographs can be manipulative in what they convey, and relates photographs taken by professional photographers at the time of the 9/11 tragedy that had a sense of beauty, and that the "landscape of devastation is still a landscape. There is a beauty in

[131] (Sharpley & Stone, 2009) p.169
[132] (Sharpley & Stone, 2009) p.174
[133] (Sharpley & Stone, 2009) p.183
[134] (Sharpley & Stone, 2009) p.183
[135] (Sontag, 2003) p.74

ruins."[136] As well as dark tourism the viewing of photographs of tragedy at memorials may include an educative value. Images have the ability to give "mixed signals. Stop this it urges. It also exclaims, What a spectacle!" states Sontag.[137]

The National September 11 Memorial, the Memorial to the Murdered Jews of Europe, and the Thiepval Memorial all include a component of education and espouse the messages 'never again' and 'lest we forget' a commonly used phrase from Rudyard Kipling's poem, Recessional. The messages are not only relevant to remembering lives lost in war as its initial intention, but also to numbers of deaths incurred in other tragedies. The two large-scale world-renowned memorials, the Memorial to the Murdered Jews of Europe and the National September 11 Memorial, provide the museum or information centre below ground, and below the memorial, whereas the recently opened information centre at Theipval which is in a rural environment is a short walking distance to the memorial. The Shrine of Rembrance in Melbourne underwent substantial redevelopment in 2003 to facilitate a visitor interpretation centre, education centre, adminsitrative offices and space for lectures and exhibitions. below ground under the existing memorial which is sited on a mound.[138,139] The intention for the 9/11 museum is stated on their website; "By providing a host of educational resources and a variety of free public programs, the Museum strives to foster a deeper understanding of the continuing impact of 9/11 and terrorism on America and the world at large."[140] This emphasises the valued educational component of memorials in assisting visitors to understand the tragedy, and what that means for a world in which acts of terrorism are becoming common place.

Eisenman did not want a museum, or any explanation associated with the Memorial to the Murdered Jews of Europe, he preferred that visitors simply questioned the stelae and asked, "what is the point and, at the same place they say there is no point."[141] The exhibition space was hotly contested but, despite the concerns of Eisenman it was programmed to be built. Many thought that future generations may forget what happened, forget who the people were, and whether there was a reason for their deaths.

Lea Rosh, journalist and initiator of the monument states three reasons for the Memorial to the Murdered Jews of Europe. Firstly, to remember the actual fact of the Holocaust and acknowledge

[136] (Sontag, 2003) p.76
[137] (Sontag, 2003) p.77
[138] (Lovell Chen Architects & Heritage Consultants, 2010)
[139] (Stevens & Franck, 2015) p. 184
[140] (National September 11 Memorial & Museum, 2020)
[141] (Kanopy, 2014)

what had taken place. Secondly, "to honour those who were murdered, and this has never happened in history that a country documents its greatest crime, highly visible in the middle of its capital in order to honour those it murdered. Many people in this country find this difficult to accept because something like this has not been done before. That's why this project was under discussion for many years."[142] The third reason for the memorial was that, "we wanted those who were murdered to get their names back, and that will take place in the exhibition centre."[143] The centre consists of four rooms; the Room of Dimensions, Room of Families, Room of Names and the Room of Sites. In the Room of Names each of the six million murdered Jews displays their "name, year of birth and year of death simultaneously projected on the four walls."[144] The names are also audible. Placing the names of victims on memorials is a widely accepted practice discussed further in Chapter 2.3 Interpretation. The question of what is displayed at a memorial or exhibition centre, and how information is displayed is varied throughout the world and, recent changes in the range or level of potentially traumatic or at the other extreme, entertaining engagement at these places is discussed through Thanatourism and the affect of this exposure on the visitor.

Concern is raised that the absence of interpretation at sites of tragedy may "render the visit meaningless to visitors,"[145] and this may relate more to the 'mindless' visitor with no prior knowledge of the tragedy. A heightened engagement with such sites is often gained by visitors who do some research before their visit, are informed with a level of awareness of the tragedy, and when on-site this prior knowledge allows them to make "connections and recognitions."[146] Roberts makes the distinction between the 'mindful' and the 'mindless' visitor, where the 'mindful' shows an "interest in new subject matter, and learning opportunities,"[147] and is more likely to learn more. The 'mindless' visitor follows a scripted experience and "their attention to alternative cultural values is less active."[148] Discussion relating to the type of visitor to the memorials in this study, and whether they can be distinguished as 'mindful' or 'mindless', and observations made regarding their ability to learn more will be addressed in Chapter 5.

---

[142] (Kanopy, 2014)
[143] (Kanopy, 2014)
[144] (Stiftung Denkmel fυr die ermordeten Juden Europas, 2019)
[145] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637. P.624
[146] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637. P.618
[147] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637 p.618
[148] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637. P.618

In his studies of visitors to the Wenchuan Earthquake Memorial in China, Yong Tang, academic in China, with a research focus on public memory and commemoration however, concludes that, "Contrary to the sympathy or emotional affection arising from the visit, visitors want to see the devastation and the monuments to those who died and pay to witness the aftermath of others' misery".[149] Tang argues that most respondents were directed "towards self-reflection, expression of sympathies to the victims, reconciliation of the imagined landscapes with topographical reality, and critically thinking of the earthquake; on the other hand, tourists feel a strong sense of 'sorrow', 'scares and worries,' and 'depression' due to the devastative blow effects of the disaster and the possibility of additional aftershocks."[150] The memorial was built on the site where more than 1000 pupils and teachers died at the Beichuan Middle School in the 2008 Sichuan Province earthquake, that killed more than 70,000 and an additional 18,000 people are still missing.

Opportunities for education about tragedy proffer multiple benefits including those mentioned above by Lea Rosh. A memorial may provide the opportunity for commemoration, and for large numbers to gather at commemorative ceremonies; it may list the names of the victims and give a brief statement of the tragedy but that is where the knowledge ends. With the fading of memory through generations there is concern that the facts may be lost, and lessons learned are not passed to future generations. At the Memorial for the Murdered Jews of Europe the distinction was made between the Field of Stelae memorial which offered a place of emotion and feelings that is not about learning nor didactic, and the subterranean information centre. The contrasting views of the politicians, art historians, and critics of the benefits of the hybrid memorial and museum are still being debated and many agree with Eisenman, but the politics of the day was convinced that a museum would raise further questions of "what happened, who were those that were murdered and why – was there a reason?"[151] The answer to that states Michael Naumann, former Secretary of Culture and Publisher is, "of course there was no reason."[152] Martin Walser, author, does not need a memorial to remember as "not a day is passed since Auschwitz that I don't think about [it]," however he concedes that, "information for future generations is essential to understand the memorial."[153] Planning for the memorial began in 1988, 43 years after the end of the Second World War and the memorial was opened in 2004. The intervening period between inception and

[149] (Stone et al., 2018) Tang, Yong. Dark Tourism to seismic Memorial Sites. p.435
[150] (Stone et al., 2018) Tang, Yong. p.423-441 p.433
[151] (Kanopy, 2014)
[152] (Kanopy, 2014)
[153] (Kanopy, 2014)

completion was fraught with political debate which Young would declare, along with a public debate, is an integral part of the process of establishing a memorial.[154]

The question of whether a visitor should pay an entry at any of these memorials is addressed by Sharpley and Stone in the moral context of commodification of tragic sites.[155] They also discuss the extent to which such places sell souvenirs and what other facilities are provided. In their view it is acceptable to charge an entry fee when any proceeds collected are put to good purpose that is for the upkeep and maintenance of the facility and the local community supports it. They cite Westminster Abbey as an example where the proceeds are a method of maintaining a historic building and of restricting the number of visitors.[156] An entry fee is charged at the 9/11 exhibition ranging from U.S.$46.00 including a tour, to U.S.$15 for a youth. The numbers entering at any one time are limited, making the queues and waiting time long and purchasing a ticket in advance with an allocated entry time is advised on the website. Entry to the exhibition at the Memorial to the Murdered Jews of Europe is free and guided tours are available for 3 Euro. Visitor numbers of 480,000 in 2019 are provided on the website.

Accounting for the limited research in learning through the experience of visiting sites of tragedy, Roberts provides a brief discussion on experiential learning for the visitor at a memorial site and proposes that future frameworks might identify "cognitive, emotional, and behavioural modes and holistic contexts of site and the tourist community."[157] She further states that the "educative missions to 'learn from the past' so that we may 'never again' repeat (dark) history might focus on increasing awareness, changing attitudes, and developing interpersonal competence."

These are aspects that can be applied to all tragic events in the past whether cultural or natural and will be discussed in the context of natural disasters in Chapter 5.

2.6 Atmospheres

The writing of two researchers draws attention to the affect that something as simple as light may have on the experience of a place. Drawing from the work of Ben Anderson, an academic who has research interest in concepts of culture, to provide a sense of what atmosphere might mean, he relates the ambiguity of atmosphere and that it cannot be defined as one specific thing. It is not simply the light cast at dusk or the mist over a river early morning that creates atmosphere

[154] (James E Young, 2019) 12:50 minutes
[155] (Sharpley & Stone, 2009) p.87
[156] (Sharpley & Stone, 2009) p.88
[157] (Stone et al., 2018) Roberts, Catherine. Educating the (Dark) Masses: Dark Tourism and Sensemaking. p.603-637. P.615

according to Anderson. In discussing the work of Mikel Dufrenne, French philosopher, and his unfinished quality of atmosphere he attempts of clarify that, "Atmospheres are perpetually forming and deforming, appearing and disappearing, as bodies enter into relation with one another. They are never finished, static or at rest."[158] "The classic aesthetic 'Affective qualities' would be the sublime, tragic, comic or beautiful," says Anderson.[159] In further examination of Dufrenne's atmosphere, Anderson notes that he does not provide a single clear definition but a "series of approximations" with a commonality, "that an atmosphere is a singular affective quality," and that the "aesthetic object creates an intensive space-time."[160] Anderson picks up on the point that, "atmospheres are unfinished because of their constitutive openness to being taken up in experience."[161] Atmosphere's are in this sense in a constant state of change and "re-worked in lived experience – becoming part of feelings and emotions that may themselves become elements within other atmospheres,"[162] and Anderson adds, "Atmospheres are indeterminate."[163]

Through this constant re-working of atmospheres by the absorption into the body every time an atmosphere is experienced it is unable to be defined as anything specific. Anderson explains, "In this process, what results is a multiplication of ways in which an atmosphere is translated into individualised experience during encounters."[164] The discussion on affective atmospheres is ambiguous as Anderson points out and in conclusion he states, "Atmospheres do not fit neatly into either an analytical or pragmatic distinction between affect and emotion."[165] "They are always in the midst of encounters, emerging and changing as they mediate life, shaping how the world is disclosed, related to and felt, and becoming inseparable from affects and emotions."[166] Shanti Sumartojo is an academic whose research explores public memorials and commemoration with a focus on atmosphere. In her experience of attending Australia's Anzac Day Dawn Service in Canberra, she discusses the influence of light and dark as affecting the atmosphere at the event. She suggests that "dawn's changing light conditions are powerful in part because they render our material surroundings ambiguous or mysterious."[167]

[158] (Anderson, 2009) p.79
[159] (Anderson, 2009) p.79
[160] (Anderson, 2009) p.79
[161] (Anderson, 2009) p.79
[162] (Anderson, 2009) p.79
[163] (Anderson, 2014) p.145
[164] (Anderson, 2014) p.145
[165] (Anderson, 2009) p.80
[166] (Anderson, 2014) p.161
[167] (Sumartojo, 2015) p.5

In general, Sumartojo is placing the Anzac memorial service in the context of the political realm and relating the political motive to the power and sense of national identity that such a service invokes in the people. In Chapter 5 discussion centres around the commemoration of the 1995 Kobe earthquake which occurred at 5:46 a.m. at a time of darkness in March, and the candlelight vigils and significance of light in Japanese culture. Historically, Sumartojo clarifies, the Dawn Service originated from a variety of traditions or happenings in different places within Australia including the act of a woman placing a wreath at Sydney's cenotaph, these taking place between 1919 and 1930. New Zealand's website for the Royal New Zealand Returned and Services Association known as RSA states the significance of the Dawn service:

> The darkness, calm and chill of the early morning; the sound of the single tap of the drum of the parade; the emotionless faces of the catafalque guard, and the mournful notes of Last Post sounded by a lone bugler, combine to give a feeling of deep solemnity. It is the intensity of the symbolism which contributes to its powerful impact upon participants; indeed what underlies its popularity. In a country with few public rituals, the Dawn Service continues to provide a sense of occasion as a meaningful ritual of remembrance.[168]

With the same programme as Australia, the New Zealand Dawn Service is "characterized by familiar rhythms of illumination, darkness, sound, stillness, proximity to other bodies and patterns of controlled physical movement,"[169] as also described by the RSA in the text above. The *darkness,* the *calm,* and *chill* of early morning, the *mournful* notes, all contribute to an "atmosphere of reverence and solemnity similar to a religious site."[170] In comparison, the Christchurch earthquake is commemorated on the anniversary around the time of day, 12:51p.m., that the major earthquake occurred. Having experienced the Canterbury earthquake commemoration service in 2020 it could be argued that without the powerful use of changing light, atmosphere was found in music, tone, and message of speakers, processional movement of people, and the ritual of releasing flowers into the river.

Sumartojo describes the atmosphere of darkness, and the not knowing of the large numbers of the people gathered for the service until the darkness ebbed. Silence camouflaged the bodies and she was unprepared for the large numbers of "unperceived bodies."[171] In conclusion Sumartojo acknowledges that her research was inclusive of her own experience in attending the Dawn Service and that her intention was not to 'downplay the ambiguity of participants' perspectives but to frame

[168] (The Royal New Zealand Returned and Service Association, 2020)
[169] (Sumartojo, 2015) p.8
[170] (Sumartojo, 2015) p.8
[171] (Sumartojo, 2015) p.14

her own experience within the public accounts. She recalls that, “the sense of respectful contemplation is enhanced by the still conditions in which the ceremony occurs, and the darkness allows a measure of privacy for solemnity or reflection.” [172] Atmosphere will be discussed in Chapter 5 in the section on Emotions, page 183, in relation to the sites visited in this research, and how it might apply to similar commemoration in the dark hours and commemoration of events that occurred during day light. Although it is not a major part of analysis it has relevance in how a site is experienced through the time of day for example a candlelit vigil or music played at a commemoration.

2.7 Conclusion

Much can be gained for this research from literature on memorials of conflict, but in researching memorials of natural disasters, the gap in literature is noticeable and would contribute a different perspective from the visual representation in the landscape to the needs of the community to remember. Multiple purposes of memorials are identified and confirm that they go beyond the role of just remembering, extending opportunities for an increased awareness, changing attitudes through an open relationship with the world, and resisting the imposition of meaning. While the answer to the research question of, why memorials matter, is partially addressed, the following chapters will examine differences in memorialisation of natural disasters in contrast to memorials brought about by human conflict, through the study of memorials in Japan and New Zealand, and how each country memorialises that can improve the preparedness for future events. The method of this research is explained in the next chapter.

[172] (Sumartojo, 2015) p.19

Chapter 3

Methods

3.1 Overview

A range of methods are used in addressing the questions of why memorials to natural disasters matter and what they contribute to society both nationally and internationally. To know why memorials in New Zealand matter and how and in what capacity they function would be a simpler research topic. To determine whether New Zealand could learn from a country that experienced so many natural disasters throughout their history and is considered a world leader in disaster preparedness,[173] Japan stood out as a place of comparison. What knowledge of memorialising could we share and learn from each other? The research for this study could be carried out from a desktop, combining literature with analysis of site plans, maps and images and information available online but that would cut short the way that landscape architects such as Bernard Lassus, visual artist and landscape architect, experience place with layers to be found and explored. Site to him is a complex layering of the broad context to the detail, macro to micro scale and one that stimulates the senses. Lassus' approach to design required a deep understanding of site and place. Inventive analysis whereby the designer goes beyond the obvious taken in at first glance, which he calls "first ignorance,"[174] by being in the place in "floating attention: to become impregnated with the site and its surroundings, in the course of long visits at different hours and in different weathers, to soak it up from the ground to the sky until boredom sets in, or almost."[175] In his own work Lassus embeds himself in the place freeing himself with awareness of all the senses and soaking up the smells, sounds, finer details, to read a book, sit and watch, if possible, visit it at different times of the day or year when it displays subtleties of light and shade, and see the finer grain that lies beyond the obvious. Site experience is then analysed with an understanding if its past, locality context, local legends adding layers to a form a complexity of place.[176]

How could I as a landscape architect not visit the places of study- without seeing the mountains, the valley, the river, the sea, the memorials in these places and the people who put them there and gaining a sense of who they are in their own culture? To not do this is to stare at a blank sheet of paper and see the world in a 2-dimensional view. How could I, a landscape architect, feel a response

[173] (Asian Disaster Reduction Center, 2020)
[174] (Lassus, 1998) p.57
[175] (Lassus, 1998) p.57
[176] (Lassus, 1998) p57

to the place without the fullness of context to view the landscape in its wholeness and in the subtleties of light, colour, texture, smells and sounds and the culture and customs that make this place distinct from any other? This is how Lassus approached his projects, and what he taught at universities, and it was a necessity of this study to visit the sites in addressing the question of why memorials matter to gain a similar knowledge of place. Case sites formed the foundation of the research. Plans and images provided in Chapter 4 can be referred to in the following discussion where required.

Many types of memorial were visited in the course of research and the variety raised more questions about their function and messages conveyed. To work through these questions a critique methodology is adopted based on the framework for design criticism developed by Wayne Attoe, in his book *Architecture and Critical Imagination*. Three categories of critique are considered: normative, descriptive and interpretive as explained in 3.2 below. The descriptive and interpretive categories are similar to Lassus' "inventive analysis."[177]

Comparative case study methodology which is suited to the complexities of designed landscapes is an important overarching part of my research design. Table 2 page 64 sets up a base template from which relevant criteria are compared and provides relative consistency across the elements being investigated. Swaffield 2017, clarifies that in case study research analytical generalisation is used to determine the significance of the findings.[178] Baseline data was collected at each memorial site although without the opportunity of repeat visits most were limited to one visit. This information was compared and contrasted through set criteria in the macro scale of country and the micro scale of each site. This allows conclusions to be made between multiple case sites against the backdrop of their contextual conditions. The comparative method is also used in examination of the changes in memorials over time to understand that they are not static and ever evolving. While culture was not a significant feature it could not be overlooked between two countries that have differing historical and cultural paths.

Experience that I gained in visiting sites in both countries provides an insight into the spatial arrangement and the indeterminate qualities of affective atmospheres. The 'how' of these memorials considers the 'place' of a memorial and the form that contributes to its manifestation and how that sits within the 'place' or context. I developed five themes which were used in exploration

[177] (Lassus, 1998) p.57
[178] (Bruns, 2017) Chapter 7

of each of the case study sites, to examine how the memorials 'work,' and how different themes are emphasised across the two countries and the range of sites.

3.2 Methodology

Following the general guide of Elen Deming and Simon Swaffield in *Landscape Architecture Research*, 2011, strategies for research were selected for their relevance to the profession of landscape architecture.[179] Literature written on war memorials or human induced tragedy introduced ways in which scholarly authors had come to understand memorials and their complexities. Literature review provided the background for an understanding of memorials, their history, performance or visitor response, the designers' intended meaning or use, and the role that memorials play in the social, political and emotional well-being of any community or nation that suffers loss through tragedy. In all the sites discussed in scholarly literature the author had spent time visiting the sites to understand the complexities of the place in its real-life context, which reinforces the value of experiencing place, and made the case of site visits stronger. It is clear that the level of detail and individualised experiences conveyed in the literature could not be gained through another method.

From a methodological perspective, my research sits within the realm of qualitative approaches, looking to enrich our understanding of the phenomenon of natural disaster memorials. It is inductive research that is based on observation at a wide range of memorial sites which is reduced to specific categories from data collection. This bottom up approach from repeated observations and analysis results in the development of a theoretical framework.[180]

3.2.1 Case studies

Case study research forms the overarching empirical method used to explore memorials in this thesis. As mentioned above, the case study strategy in addressing differences and similarities between memorialisation in New Zealand and Japan, would provide the necessary knowledge of the memorials in their cultural place. Deming and Swaffield confirm the need in sites that are complex "and involve[s] the interaction of both human and biophysical relationships," to adopt a case-study strategy."[181] Robert Yin summarises a twofold definition of case study research:

[179] (Deming, 2011)
[180] (Walliman, 2018) p.19
[181] (Deming, 2011) p.80

1. A case study is an empirical method that

   - investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when

   - the boundaries between phenomenon and context may not be clearly evident.

2. "A case study

   - copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result

   - benefits from the prior development of theoretical propositions to guide design, data collection, and analysis, and as another result

   - relies on multiple sources of evidence, with data needing to converge in a triangulating fashion.[182]

As noted in the introduction of this chapter multiple case sites were studied thereby providing a greater understanding of the differences and similarities between many sites within a range of typologies. In landscape architecture practice it is generally understood that visiting a site to understand and experience a range of nuances, is essential to fully comprehending the place. Discussed in his argument for a real experience, a sense of place as opposed to a digital one, Mitchell Schwarzer, architectural historian with an interest in landscape technology, claims that "Digital culture accelerates movement through landscapes, yet diffuses the intensity of engagement with them."[183] He is referring to the use of Google maps and images that make it easy from a computer screen to explore places, to walk the streets and fly over landscapes with speed. He raises questions about the validity of screen images and the angle that they are taken from, the pieces they leave out and digital enhancement that does not give an accurate portrayal of the place. This, he says, diffuses the intensity of place and cannot replace the real-life engagement with the place.

Prior to the research journey to Japan digital images and maps were useful in gaining some insight into the cities and towns to be visited. However, they could not, as discussed, replicate the experience according to Lassus and Deming and Swaffield, of being immersed in the actual site. Landscapes not met with destruction of disaster remain intact and to a degree unchanged, and

[182] (Yin, 2018) p.15
[183] (Schwarzer, 2013) p.144

seasons and growth of vegetation could be observed through digital images if available over a period. However, many of the places and memorials scheduled to visit in Japan were not in Google images or images through tourist web sites. Imagery captured in Google maps showed places in either a pre-disaster, destroyed or partially reconstructed state, having been taken in many cases in 2016. With much of the recovery and re-build phase incomplete, case studies could not be examined from digital imagery. At the time of the case study visit, August/ September 2019, a great number of memorials were in place and others nearing completion.

Close-up encounters with places give different angles of viewing, a human scale view of landscape beyond the site in the perspective of the viewer. The time of day, angle and intensity of light or activity from other visitors changes throughout the day altering perceptions and experiences making provision for a range of responses to the place. "When we augment or replace a site visit with digital imagery, we are subject to its particular methods and meanings," subverting to codes and "elemental forms" of digital layout, suggests Schwarzer.[184] Manipulated images are not the view of the person on the ground but altered by "multiple layers of hypertext."[185] Schwarzer explains that the altered image is captured in a particular camera lens producing pixelated images that "are easily manipulated with respect to their size, optical fidelity and chromatic and textural characteristics."[186] Limitations of digital imagery may not show up to date imagery and do not capture experiential dimensions and cannot be solely relied on for case study research. Authors of reviewed scholarly literature repeatedly visited sites until they were familiar with all their subtleties and complexities.

To detect the possibility of patterns in the themed characteristics of memorials and note any differences between natural disaster memorials in Japan and Christchurch, multiple case studies offered a wide range of memorial types for comparison. Without available scholarly literature, with a landscape architecture focus on memorials of natural disaster, a simplified approach studying one memorial in Christchurch and one in Japan would not open the opportunity to understand the breadth of memorial types to natural disasters throughout Japan. Without prior knowledge of the memorials, a single memorial may fit into the category of one type at the exclusion of others and may not provide the same opportunity for discovery of the differences in the two countries, and therefore a base of shared knowledge. Memorial types included those that are dedicated to commemoration, protective structures that reform a landscape such as roads and sea walls, museums and disaster educational institutions. Memorials to human-induced tragedy offer commemoration, and possibly a museum, but do not extend to educational and research institutions

[184] (Schwarzer, 2013) p.144
[185] (Schwarzer, 2013) p.144
[186] (Schwarzer, 2013) p.144

and protective structures. However, the Great Wall of China built over 2000 years ago and Hadrian's Wall built in Roman times are exceptions and could be considered protective structures built to defend from invasion. Visiting multiple memorials in the "real-world context" was essential to see the broader context of memorials in their evolving landscapes. Working between how site data would be collected, and the critique method required a fluid approach.

3.2.2 Critique

There are a range of theorists who draw on different classifications including Wayne Attoe (1978);[187] Alexandra Lange (2012);[188] and Bernadette Blanchon (2016).[189] Bowring discusses the approach of the three critics comparing their classifications and acknowledges that they are not mutually exclusive. The theorists and range of classification are summarised in Table 1, page 51, by Bowring. Bowring considers Attoe's classification to be the most appropriate for Landscape Architecture Criticism "for its simplicity of form and clarity of terms,"[190] and summarises these terms in relation to the intention of the critique and the theoretical basis. I concur with the approach of Attoe, who developed a system for critique that is divided into three distinctive categories of normative, interpretive and descriptive.[191]

The **normative** approach critiques through a measure of standard norms or doctrine such as 'form over function' and follows a "conviction that somewhere in the world *outside* a building or urban setting there is a model, pattern, standard or principle against which its quality or success may be assessed."[192] Attoe questions the usefulness of following a strict method of assessment in that, "they encourage easy, right/wrong formulations."[193] Sites in this study were to be explored not in terms of meeting norms, but for aspects that might reveal what opportunities the memorial offers for commemoration, grieving, social space and education where there is no 'right/wrong'. The normative approach is limited in being able to meet the criteria for this study.

Attoe proposes a second approach, **interpretive** criticism, which is characterised as being "highly personal."[194] The critic is subjective and brings something of themselves and "seeks to mould other's vision to make them, see as [they do],"[195] interpreting the design from their own experience.

---

[187] (Attoe, 1978)
[188] (Lange, 2012)
[189] (Blanchon, 2016)
[190] (Bowring, 2020) Chapter 3
[191] (Attoe, 1976) p.20
[192] (Attoe, 1978) p.11
[193] (Attoe, 1978) p.14
[194] (Attoe, 1978) p.49
[195] (Attoe, 1976) p.20

Building a picture with this background is non-judgemental and sets a basis for further critique and opens the opportunity to "persuade others of a particular point of view."[196] Attoe breaks the interpretive method of criticism into three: "techniques advocatory, evocative and impressionistic criticism."[197] Evocative criticism is a plausible means of critique according to Attoe. The critic in this sense conveys their own emotional response at a place, evoking or arousing similar feelings in the audience. Atmosphere as discussed in Chapter 2 in relation to Sumartojo and Anderson as a form of evocative criticism that can be relevant at memorials where a range of emotions can be aroused, and was useful in this study at memorial sites where atmosphere played a part in the interpretation of a site visited. Attoe further clarifies that the "key to interpretive criticism is not to accuracy but plausibility."[198]

For the intended audience to relate to the site and understand what is there, a **descriptive** approach was necessary. Bowring discusses the key attributes of a descriptive criticism, "It is not an evaluative approach, but one which is intended to enhance the understanding of a work within its context, including how it came about, how it relates to the designer's oeuvre, and the political and social conditions that contributed to its development."[199]

"Descriptive criticism includes:

- *depictive criticism*, in which static or dynamic aspects of the [memorial] are pictured for us either verbally or graphically; it might also outline the generative process whereby the [memorial] was desinged;
- *biographical criticism*, in which pertinent facts about the makers of the building are noted;
- *contextual criticism*, in which events associated with the design and production of the [memorial] are recounted."[200]

[196] (Bowring, 2020) Chapter 3
[197] (Attoe, 1978) p.49
[198] (Attoe, 1976) p.20
[199] (Bowring, 2020) Chapter 3
[200] (Attoe, 1978) p.85

Table 1 Comparison of classification of the purpose of criticism from Wayne Attoe, Alexandra Lange and Bernadette Blanchon. Jacky Bowring 2020[201]

	Attoe (1978)	Lange (2012)	Blanchon (2016)
Evaluative, judgemental criticism	NORMATIVE Based on norms, standards Design is compared to an external ideal	FORMAL Description of form, visual elements Can be based around site organisation Implied judgement	DESCRIPTIVE Observation and analysis of the design in aesthetic terms. The approach of the 'art critic'
Contextual, non-evaluative	DESCRIPTIVE Situates a design through positioning it within a designer's oeuvre, political/ social context, process of creation	HISTORICAL Designer's career Contextual	MONOGRAPHIC 'Learning from method', criticism as a 'lesson', general principles
Literary, evocative, non-evaluative	INTERPRETIVE Creating impressions, evoking a particular frame, or advocating Framing an interpretation	EXPERIENTIAL How a work makes you feel	
Contextual (context of the city), evaluative		ACTIVIST Writing in defence of the city and how works affect it	
Contextual (context of the designer), non-evaluative			CONCEPTUAL Conceptualising the practice process, looking at the intentions of those involved, and reception of project by users and by other critics
			COMPARATIVE Explore several projects in the same area, or addressing same question
			HYBRID

[201] (Bowring, 2020)

Descriptive strategies involved collection of data from case studies and observation through visiting the sites, then classification of that data into typologies of memorials. When visiting places that were in the recovery phase, flexibility of strategies and alternative methods were adopted, for example 'snowballing' when one contact or connection leads to another and another, and so on, exponentially, multiplying opportunities. Having been in practice as a landscape architect for 20 years, I was familiar with the study of site or place, its character, and site analysis, and could observe nuances not obvious to the untrained eye. Observation method is detailed in Chapter 3.3.1

Through examination of these three approaches to design criticism it was determined that the descriptive and interpretive categories were of most value for the purpose of finding differences in the design and messages of memorials throughout Japan and in Christchurch. It is acknowledged that there is some overlap of the three categories and in this study the interpretive approach complements the descriptive by allowing the reader to "share in the experience of visiting the site,"[202] an idea that can be taken further by employing an evocative approach which sits within the category of interpretive critique.

Attoe states that critique "can have an effect on the future."[203] He further claims that "architecture criticism generally," … "has typically failed to look forward, to attempt to influence current decisions to effect a more tolerable future."[204] The purpose of this thesis follows Attoe's call to critique, to find concepts that are of value and contribute to the saving of lives and infrastructure in the event of future natural disasters. In both these approaches there is no judgement made about the design, but all aspects are considered on their merit. Figure 3.1 sets out the approach taken, working from the selection of the critique methodology to the tools that assisted in finding the information or data, to sorting of that data to look for similarities and differences in a range of elements.

[202] (Bowring, 2020) Chapter 3
[203] (Attoe, 1976) p.xv
[204] (Attoe, 1978) p.xv

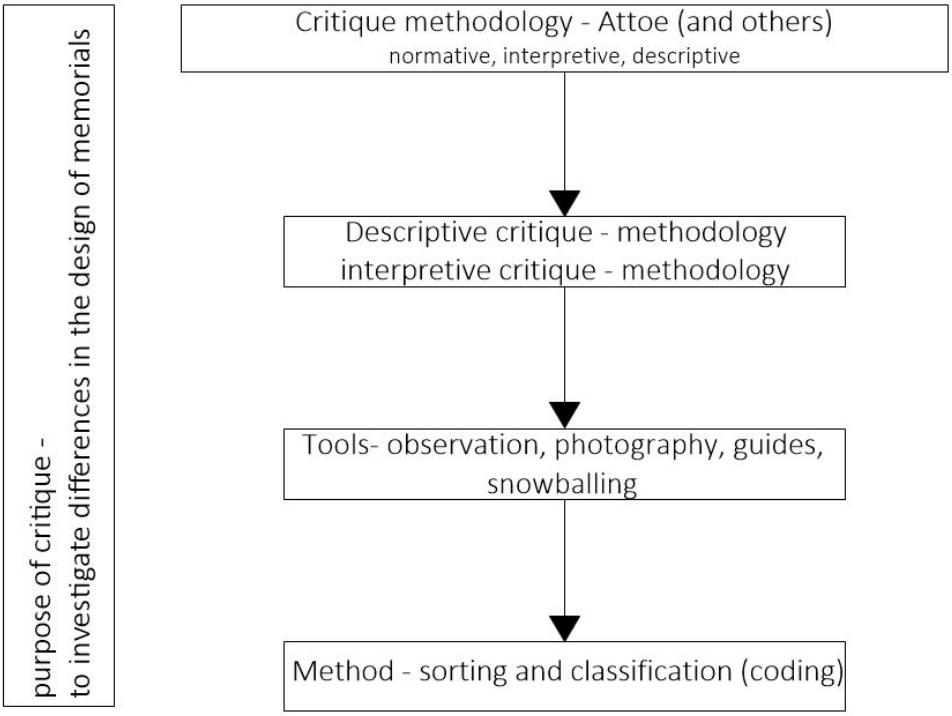
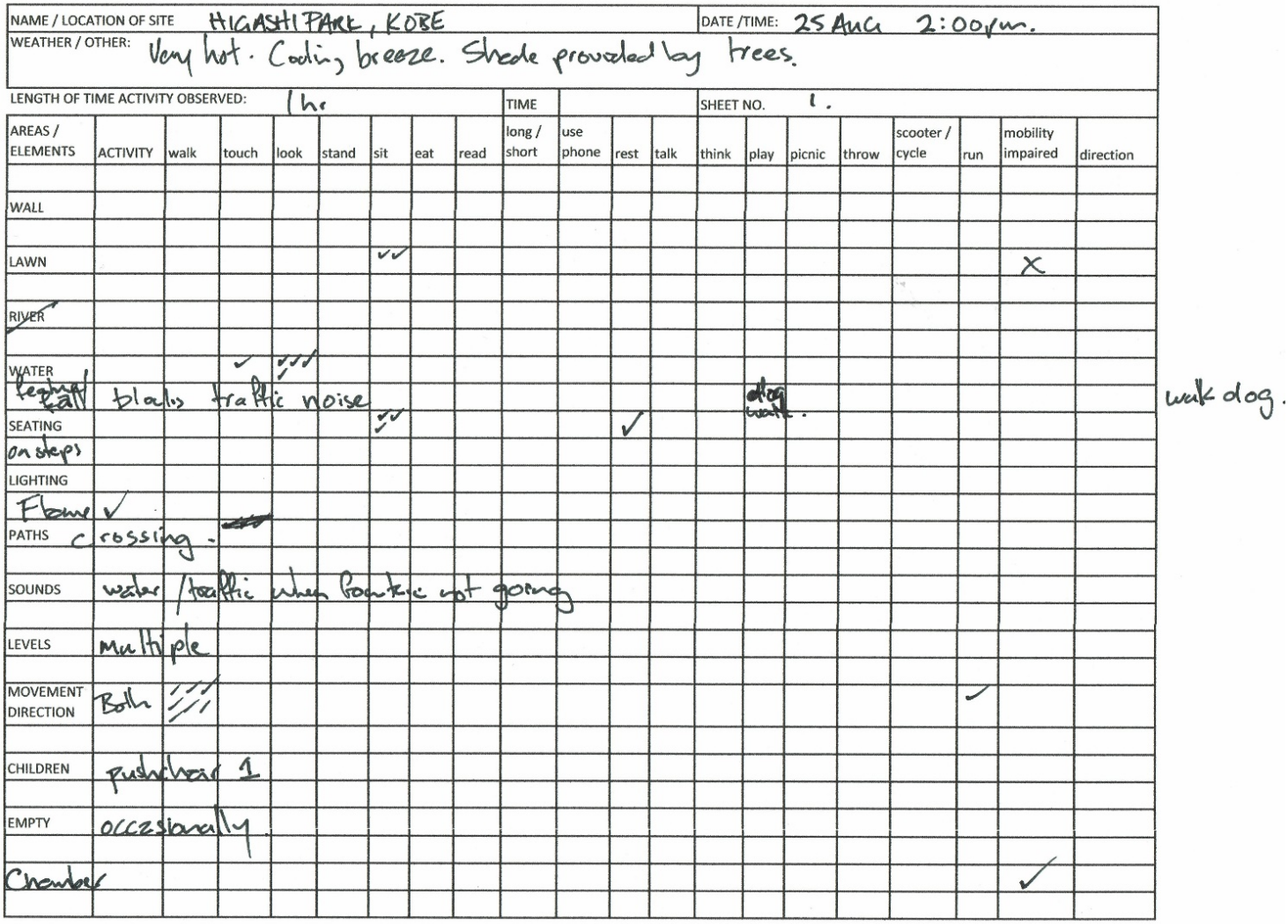


Figure 3.1. Diagram of research process from selection of methodological focus on critique to the method of analysis. Drawn by Louise Bailey, 2020

3.3 Tools

A range of tools were employed to collect data for classification and analysis. The larger component was observation at sites that provided contrasting approaches to the type of memorial: purpose-made; retained or remodelled and remnant. Using both descriptive and interpretive approaches to observation, provided a balance of information of the physical site and contextual relationships. Other tools such as photography and guides at sites filled a multi-dimensional role providing additional information that was not accessible at first glance and would be useful later in site analysis. Unchartered territory in Japan required a level of snowballing to find memorials that were not widely publicised and required local knowledge to locate. Determining which sites would be more beneficial in the final analysis, reduced the greater number of memorials to a more manageable comparative result.

3.3.1 Observation



NAME / LOCATION OF SITE: HIGASHI PARK, KOBE — DATE /TIME: 25 Aug 2:00pm.

WEATHER / OTHER: Very hot. Cooling breeze. Shade provided by trees.

LENGTH OF TIME ACTIVITY OBSERVED: 1hr — TIME — SHEET NO. 1.

AREAS / ELEMENTS	ACTIVITY	walk	touch	look	stand	sit	eat	read	TIME: long / short	use phone	rest	talk	think	play	picnic	throw	scooter / cycle	run	mobility impaired	direction
WALL																				
LAWN						✓✓													X	
RIVER																				
WATER			✓	✓✓✓																
SEATING	blabs traffic noise					✓✓					✓			dog walk.						walk dog.
on steps																				
LIGHTING																				
PATHS	Flowe ✓																			
SOUNDS	crossing.																			
LEVELS	water /traffic when traffic not going																			
MOVEMENT DIRECTION	Multiple																			
CHILDREN	Both	✓✓✓																✓		
EMPTY	pushchair 1																			
Chamber	occasionally.																			
																			✓	

Figure 3.2. Sample observation chart showing data collected at Higashi Park in Kobe. Drawn by Louise Bailey, 2019

3.3.1..1 Site observation: descriptive

Having a relatively systematic approach to site observation meant that the same criteria could be recorded at each site without needing to rethink aspects of observation particularly when time was limited at many of the sites. The observation chart, Figure 3.2 also allowed for patterns to merge in comparison of data attributes across all sites at the analysis stage. From site observation in Christchurch this chart was developed similar to that proposed by Barbara Goličnik, of the Urban Planning Institute of the Republic of Slovenia and Catharine Ward Thompson, of Edinburgh College of Art. Rather than use a plan of the site, which was not available in advance due to the lack of prior knowledge of the sites and their context, the chart was designed to be quickly adapted to incorporate variations from site to site. A simple tick in a box was all that was required in the chart

rather than the more time-consuming coloured symbols of Goličnik and Thompson's maps.[205] Their method of mapping people, and activities was to provide empirical data about the spatial articulation of parks, and demonstrate the "value of this methodology in revealing relationships between design and use that are based on empirical evidence" by "filling some of the gaps" in other methods of data collection.[206] By plotting people's location in a park space at different times of the day they were able to determine a range of factors in relation to usage, including spatial relationships such as how close people would sit next to each other on a park bench or observing which areas were more active and more used than others. Behaviour mapping in combination with GIS data they believe, "provides a powerful tool to support designers with empirical evidence of the relationship between environmental design and use of open space" … "in a language that is familiar to designers."[207] The data collected at memorials in Japan and Christchurch was to demonstrate how the use of a memorial related to the design and design intention or message of such spaces.

Daily access to the Canterbury National Earthquake Memorial allowed time to study the memorial in Christchurch and to test and determine appropriate methods of collecting information prior to traveling to Japan. A recording sheet was developed to collect information at each site noting the name of the memorial or place, date and time of day, key elements e.g. water features, steps, seating opportunities, and materials such as grass or paving and the surrounding environment including parks, buildings and sounds. Activities of people visiting the spaces was recorded on the chart under columns of eating, talking on the phone, touching the elements listed for example water, walls or a list of victims' names etc. Elements not common to all memorials could be easily added to the chart at the site visit. For instance, discovering that memorials performing as places of education in Japan was unexpected and had not been included as an element for observation. Eleven of the seventeen sites visited in Japan focussed on education and preparedness. The strong presence of education as memorials had not been anticipated and became significant in the final charting of messages and typologies of memorial. This category of observation and how people responded to the educational opportunities was added to the observation chart. From the analysis of this data additional information was collected that was possibly not available in photographs. Observation and writing notes were useful tools in collecting information such as sound and weather conditions and more personal information, for example people grieving, that was inappropriate to photograph.

[205] (Goličnik & Thompson, 2010) p.38-53
[206] (Goličnik & Thompson, 2010) p.38
[207] (Goličnik & Thompson, 2010) p.52

Time available at each site varied, from some that the travel schedule allowed for repeat visits over many hours, to others that were time pressured and only allowed for an hour or less. The collection of the data allowed for comparison of the behavioural response at the range of sites in the study.[208] Numbers of visitors to the sites were not recorded, although an evaluation of numbers obtained through photographs was deemed adequate as the sites were not assessed for the numbers only. Marc Treib questions, "Why does every landscape need to be comfortable all the time? Why must every plaza judge its success by the number of people it attracts? Can not a void, or silence, or a place to be alone, equal in value collective gatherings with large numbers."[209] These questions are discussed in Chapter 5.

The discussion in Chapter 2.6, page 41 debates the ambiguous nature of affective atmospheres and questions whether emotion can be removed from the experience of objects and how much a person's internal being affects the experience. Bowring discusses the link between emotion and experience in the critique of a place, "Experience and emotion are often intertwined, as experience can be productive of emotion, and emotion can elicit different kinds of experience."[210] Terry Eagleton explains that "Aesthetics is born as a discourse of the body." His interpretation of aesthetics is taken from the Greek *aesthesis* which refers to the "whole region of human perception and sensation," … a distinction "between the material and the immaterial: between things and thoughts, sensations and ideas, that which is bound up in our own creaturely life as opposed to that which conducts some shadowy existence in the recesses of the mind."[211] Sumartojo relates her experience of attending the ANZAC dawn service and how she used her own body experience to interpret the atmosphere of darkness. Bowring warns of the "temptation to elide easy experiences – like comfort – with the success in evaluating designed landscapes. Thinking critically, it is crucial to question these kinds of experience, and whether they are appropriate to the site."[212] Notes recorded at the end of each day after a site visit ensured I reflected on the emotional responses and affective atmospheres experienced.

Cultural difference required consideration at memorial sites in Japan as the practice of commemoration is different from New Zealand. Traditional rituals of bowing, joining hands in prayer and stopping in front of a shrine needed to be respected. Many of the memorials included a separate shrine for the offering of prayers, the design being specific to Japanese culture. The site

[208] (Goličnik & Thompson, 2010) p.38-53
[209] (Treib, 2004) p.19
[210] (Bowring, 2020) Chapter 7, Abstract
[211] (Eagleton, 1990) p.13
[212] (Bowring, 2020) Chapter 7

observation chart also recorded cultural practice at places of remembrance in New Zealand and Japan.

Actions and behaviour of visitors towards the site were also captured in photographs for later analysis to be correlated with the observation chart site recordings. Quentin Stevens explained in discussion that this is a technique he uses at sites and is discussed in more detail later in this chapter. Observation at sites provided an insight into the behaviour of the visitor; their intention of visiting the site whether for a place to stop and rest, eat lunch, talk on the phone or for commemoration or education and on occasion all of these.

3.3.1..2 Site observation: interpretive

Following a similar approach to Karen Till using the 'narrative' to understand a place, stories unfolded.[213] Her ethnographic approach "focuses on why people make places to create meaning about who and where they are in the world, and how, in the process of place making, they communicate feelings of belonging and attachment." In her book *New Berlin: Memory, Politics, Place,* Till inserts sections where she notes her own thoughts and observations that were made intermittently at the same site over more than a decade, observing that over that time those thoughts and responses changed. In the observation of her feelings during a visit to Auschwitz she noted, "I realised that while the exhibit in the basement was for me rather upsetting, it was not as graphic as other exhibits I have seen in Germany and Poland."[214] This observation raised questions in her studies about the need or ethics of showing such information at memorials and museums. Through my visiting of museums, memorials and earthquake and tsunami information centres layers of information were collected. Feelings or unintended and spontaneous encounters are difficult to record on the observation sheets used on site (Figure 3.2), and other means of recording the experience were adopted.

Many of the museums and disaster education centres in Japan played videos with footage of the disasters as they unfolded through a time lapse portrayal often revealing the personal stories of tragedy. Nobiru an outlying village of Matsushima was badly damaged by the tsunami while Matsushima, being protected by rock formations and outer bays, received comparatively little damage. At the time of visiting the site a group of visitors to the Nobiru Station- Higashi-Matsushima 3.11 Disaster Recovery Memorial Museum, had been watching a video played in Japanese. Unlike many of the museums visited a version was available in English. One of the survivors, an elderly gentleman, stayed in the room as the documentary was replayed and I was able

[213] (Karen E. Till, 2005) p.11
[214] (Karen E. Till, 2005) p.113

to stay and watch. This same gentleman spoke (with subtitles) in the video footage and told of his experience. He had evacuated with his wife to higher ground but at some stage without his knowledge his wife had returned to their home to retrieve a dog they were minding for their son. She did not return. For years afterwards he would visit his wife's grave and eat his meals with her. The tsunami had occurred eight years earlier and the loss for him seemed very raw. A woman in the video, addressing groups of school children, was relating the tragedy of her daughter-in-law who was swept up in the tsunami. She spoke graphically of the mutilation that happens to bodies dragged through the wave along with all the debris that it collects in its path. Her role is to travel the country and address school groups warning of the horrors if they do not heed the warnings. The graphic descriptions of unidentifiable bodies were details that many would rather forget. Such personal stories bring the reality and vulnerability of the human to the fore and will be discussed later in relation to the theory and ethics in the level of detail that could be exposed to the public and engendering empathy in the viewer to elicit change and compare this portrayal of information with that of Christchurch.

A Skype meeting with Quentin Stevens, an academic in Australia, who writes extensively about people's behaviour at memorials, provided an insight into the techniques he used when visiting memorial sites. I followed his methods of collection of material for analysis at sites which comprised of empirical observation including data collection through a chart of objects generic to memorial sites and activities of the visitors recorded at specific times of the day (Figure 3.2). He explained that many photographs would be taken at different times of the day if possible and notes written up at the end of the day to record observations not easily detected in photographs. These included sketches of the layout and design, weather conditions, discussions with people acting in a professional capacity, level of complexity in finding the memorials, and the author's response or design critique of the memorials. Similar to Till, in his observations at Berlin's Holocaust Memorial, Stevens adopted an empirical method that included allowing his own sensory experiences to influence his findings.[215] Stevens' observation at the Memorial to the Murdered Jews of Europe took place over a period of five years during which he accumulated photographs, and interviews with professionals that helped form the full narrative that unfolded. Sumartojo applied an auto-ethnographic approach, using her own 'body as an instrument of research."[216] There is a subtle difference between these two approaches where one is sensory and may relate more to sound, sight, touch and form whereas the ethnographic approach is more of a personal response in emotion to the place or atmosphere. Both approaches were used in the site visits in Japan and Christchurch

[215] (Stevens, 2012) p. 39
[216] (Sumartojo, 2015) p.10

and notes recorded at the end of the day tracked these responses at the site. Without interviewing visitors to the memorials, a sense of their experience was gained through my own feelings and observations.

3.3.2 Photography

Photographs were taken at memorial sites to record spatial arrangements including the surrounding city and landscape and to record people and their actions or engagement with the place. There were times in confined spaces of commemoration when the taking of photographs in close proximity was inappropriate even though it was the elements and not people that were being recorded. Sumartojo did not take photographs during the 30-minute ANZAC service as it may have disturbed those around her.[217] Media images of the service were used for her research. Photographs at the sites I visited were not taken of people grieving out of consideration of their private space and feelings. Taking photographs in the more public spaces where visitors and tourists were also taking photographs was less invasive and in keeping with behaviour of others.

As mentioned in 3.2.1..2 in discussion with Stevens, the photographs provided a memory of sorts that could later be recalled to reactivate information collected and details not obvious at the site could be further examined. The collation of photographs into types of memorial allowed patterns to emerge. Reflection allowed a re-immersion into the place, bringing to life the experience of being there in body and re-setting the memory.

3.3.3 Guides

A Human Ethics application through Lincoln University was not required, as no direct contact or interviews were to take place other than meeting or discussing aspects of the research with people acting in their professional capacity. Guides and hosts or managers at museums in Japan, researchers and authors of scholarly literature were contacted and provided valuable information within their professional capacity. The first place visited in Japan was Kobe, where a previously arranged contact had been organised with Kohei Takahara, a researcher at the Disaster Reduction and Human Renovation Institute in Kobe, which aims to reduce the risks associated with natural disaster and acts as a global centre for research and study of disaster risk management. Being guided by someone with knowledge of the sites, their location and background was invaluable. English is not commonly spoken in Japan and many memorial sites do not provide an English translation if any explanation at all. Although the guide spoke English, communication was a challenge and the more

[217] (Sumartojo, 2015) Section: Anzac Day: Memory and national Identity in Memorial Spaces

complex questions relating to landscape matters were not clearly addressed as Kohei's interest was in commemoration but not specifically the design of the space. While Kohei spent a day covering a wide range of memorials the speed required to traverse the territory required a further visit to the sites the following day to chart observation and explore in greater detail.

A guide in Rikuzentakata, was also required as little information was available in English, and as the town was still undergoing major reconstruction navigation was a challenge. Public transport in Rikuzentakata was not yet running and a car was necessary to cover the distance between areas of interest. Apart from the Miracle Pine, which had been extensively covered in online media little else was known about the rebuild and proposed memorials prior to the visit. Hazuki Kumagai a recent university graduate and official guide in the town had also arranged accommodation as most websites were in Japanese and places to stay were in short supply.

Hosts at earthquake / tsunami information centres provided written material of memorials that were documented and locations of other memorials that were not marked on maps nor written about in the media. Richard Halberstadt, a British citizen and long-time resident of Ishinomaki, and the Director of Ishinomaki Tsunami Info Center [sic], (Figure 3.3), explained the layout of the centre and the reasons for such a precise curating of photographs, documents and artefacts. His knowledge was invaluable in extending the places to be explored beyond the confines of the city.

Figure 3.3. The street in Ishinomaki with temporary units beside the Tsunami Information Centre. Eight years after the tsunami the town is still recovering. Photo by Louise Bailey, 2019

Research in disaster zones poses challenges of navigation when maps are not updated to reformed and re-routed roads. Further challenges arise from the lack of publication of memorials that are in the process of development and not yet mapped, written about or brochures available at information centres to locate them. In these instances, a guide or host is essential to delve further into a deeper layer of the place and people and the ways in which they memorialise. The following section on snowballing explains how this information, or lack of It, was extended.

3.3.4 Snowballing

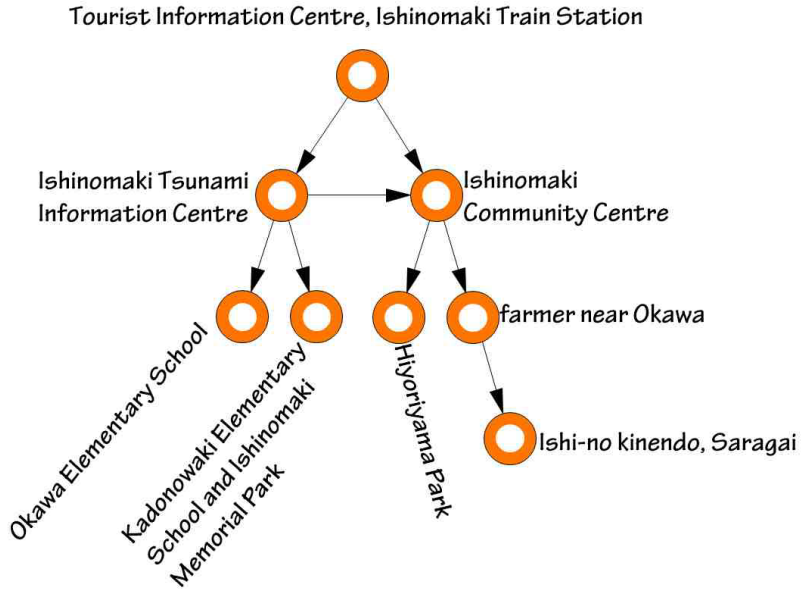


Figure 3.4. Diagram of Snowball Sampling. Image by Louise Bailey, 2020

Some memorial sites were not found readily on websites or were more obscure and only known locally in the towns. In such cases the research method of 'snowballing' was useful. Having identified a starting point of enquiry, referrals are given to additional sources of information who again provide further referrals, and gradually the number of contacts and information gathered snowballs. Visits to earthquake museums and visitor information centres in the towns and conversation with the museum managers lead to other memorials being suggested as places to visit or referrals were given to other information centres that could provide information on their local memorials. It was a process of moving from one information centre to the next with conversation and enquiry at each place as shown in Figure 3.4. Finding the more obscure locations meant making enquiries at local businesses or asking people on roadsides for directions and this process eventually lead to a memorial and location. Snowballing is often used for sampling research to find people and places not readily found through other means and the concept of one connection leading to another and the effect of connections multiplying may be used to access interviewees in research. In this case the

concept was useful as a way of finding memorials that were not well known or documented and gaining small leads from one person to the next until the site was found.

3.3.5 Selection of case studies – sampling

As discussed in Chapter 1.3 the area of study is limited to the Pacific Rim, Ring of Fire. Through online information it was clear that Japan had many memorials sites from both The Great Hanshin-Awaji Earthquake of 1995 and the 2011, Great East Japan Earthquake, that would provide ample case sites within a manageable proximity. The seventeen sites visited in Japan were too numerous to be included in the critique and subsequent discussion, therefore a selection was required to determine the best examples of memorial for the focus of the research. Deming and Swaffield state that the sample "needs to be narrow enough to make a feasible and relevant study, and yet broad enough to yield generalizable results or patterns."[218] A chart categorising the memorials into a typology, selecting a range of different memorials as well as those that stood out for their national or historical significance, reduced the number to fourteen, including sites from New Zealand.

Information pertaining to the restoration of the Port of Kobe and the associated Meriken Park including the preserved ruins was more readily sourced as it is a popular tourist destination and the effects to Japan's economy and its major port were well documented. Having this base of information, and the fact that these memorials are widely acknowledged in Japan made them more accessible as case sites. Kobe was selected as a study site for its nationally significant earthquake memorials which included The Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution which houses a research and education centre and museum. Twenty-six years had elapsed between the two disasters in Japan and the timespan allowed for the possibility of a difference in memorial typology to emerge through comparison.

The East Coast of Japan was chosen for its diversity of memorials in communities that had in some cases completely relocated towns, and like Christchurch were still in the phase of recovery from the 2011 disaster. New Zealand compared itself to recovery efforts in Japan which appeared to be faster than Christchurch and frustrations grew and angered residents of Christchurch. Questions were raised about the ability of Japan to respond quickly when recovery seemed slow in Christchurch.[219] Spontaneous memorials emerged in Christchurch that provided places of gathering and grieving and similarly the Miracle Pine in Rikuzentakata received media attention and raised questions about the symbolism of resilience in devasted places. Reconstruction of enormous proportions of the East

[218] (Deming, 2011) p.130
[219] (Day, 2014)

Japan coastline raised questions about the breadth of the type of memorials and the options that New Zealand could consider for futureproofing of disaster-prone areas. Reconstruction of State Highway 1 along the Kaikoura coastline, although of smaller scale than reconstruction in Japan, serves as a place of study that offers potential for questions to be answered on the form of memorials and their messages.

3.4 Conclusion

Disasters occurring in the same year only weeks apart in the two different countries provided opportunities for comparison on a range of issues. How does each of these countries memorialise events that occurred at approximately the same time? What are the lessons that could be shared? How well prepared are the people in each country to respond safely in the event of future disasters?

Headings in Table 2, page 65, refer to discussion in the Literature Review in Chapter 2. Once each colour coded theme is completed, patterns would emerge revealing consistencies or differences in themes leading to a greater understanding of the different types of memorial and their physical, contextual, and atmospheric design. The last method on the diagram of research process (Figure 3.1, Page 54), “sorting”, is discussed in the introduction of Chapter 5.

To place the literature review in context of sites visited for this thesis, following the applied research method, an understanding of the spatial arrangement of each site is required. Sites were chosen for ability to illustrate marked differences in their attributes and to reveal patterns of those differences and commonalities. Chapter 4 provides a general outline of each site including plans and images.

| | | |

Chapter 4

Case Sites – description

Natural Disaster Memorial Places – Japan and New Zealand

This chapter provides an overview of each site with a description providing a basis of knowledge of the memorial and its context that can be referred to in later chapters on findings and discussion. Seventeen sites were visited in Japan, and are too numerous to mention within the framework of the thesis. The sampling method reduced the schedule to the sites as shown in Table 2. The memorials are listed under the main heading of the disaster and date which includes two earthquakes in Japan and two sequences in New Zealand. The ancient stones are included as a case study and do not fall within any specific disaster and were not visited but are included as a case site for their exemplary status as a marker in the landscape.

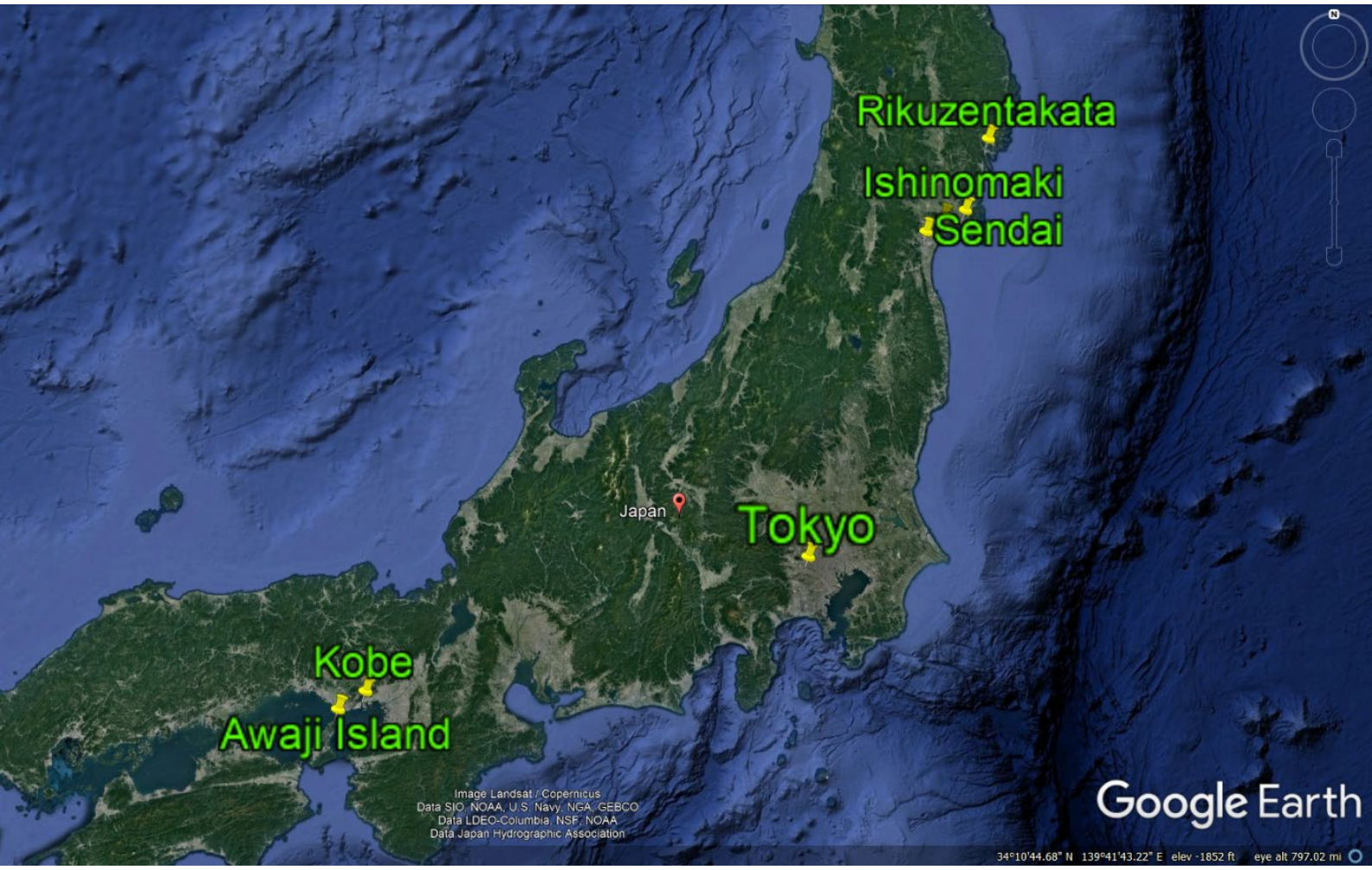


Figure 4.1. Map of Japan showing the location of case sites excluding Tokyo. Image by Google Earth Pro

4.1 Older tsunami disasters

4.1.1 Ancient stones

LOCATION: along the east coast of Japan

DATE OF DISASTER / MEMORIAL: Some more than 600 years old. Most stones date back to around 1896.[220]

NUMBER OF DEATHS: not known

DESIGNER: past citizens

PURPOSE: warning

DESCRIPTION / TYPE: marker

Markers, (refer to Figure 1.5), are dotted along the Tohuku coastline set back in small valleys marking the height of earlier tsunami. Some carry warning not to build below the marker and others give vivid descriptions of the destructive force of the waves by listing death tolls or marking mass graves.[221]

[220] (Fackler, 2011)
[221] (Fackler, 2011)

4.2 The Great Hanshin-Awaji Earthquake, 1995

4.2.1 Cosmic Elements

LOCATION: Higashi Yuenchi Park (Kobe East park) near the town hall of the city of Kobe, Japan (map Figure 4.2).

DATE OF DISASTER / MEMORIAL: 17 January 1995/2000

NUMBER OF DEATHS: 6437

DESIGNER: Singo Kusuda.

PURPOSE: commemorative

DESCRIPTION / TYPE: sculptural

Figure 4.4 shows the plan layout of the memorial site. Built into a mound in a corner of the Higashi Yuenchi Park, set amongst trees the memorial appears above ground with a two-sided wall of cascading water (Figure 4.3), and descends below ground into a circular concrete chamber with the names of the 6,437 victims inscribed on panels around the walls (Figure 4.5). The interior is illuminated by a ceiling of swirling water from the waterfall above. Externally the main structure is surrounded by a series of stepped terraces in red brick that appear to form contours of the land (Figure 4.6) with concrete walkways intersecting, providing through access. The room is accessed by means of stairs at one entrance and a spiralling sloped path at the other. Access below ground is locked at night by gates at each end. Tucked into an adjacent corner is the “1.17 Light of Hope” (Figure 4.7), a gas-fuelled eternal flame which is the centre of commemoration on January 17 each year.

CONTEXT: Higashi Yuenchi Park is in a central area of Kobe, walking distance from Sannomiya Station and shopping district and near Meriken Park and Port of Kobe Earthquake Memorial Park. The park area surrounding Cosmic Elements contains several separate although linked spaces including an open grassed area surrounded by trees suitable for holding large gatherings, a raised terrace where performances are held and a linear sculptural treed walkway with water features.

Figure 4.2. Map of Kobe including Higashi Yuenchi Park, Meriken Park and Port of Kobe Earthquake Memorial Park. Image by Google Earth Pro, labels added.

Figure 4.3. Cosmic Elements in Higashi Yuenchi Park. Photo by Louise Bailey, 2019

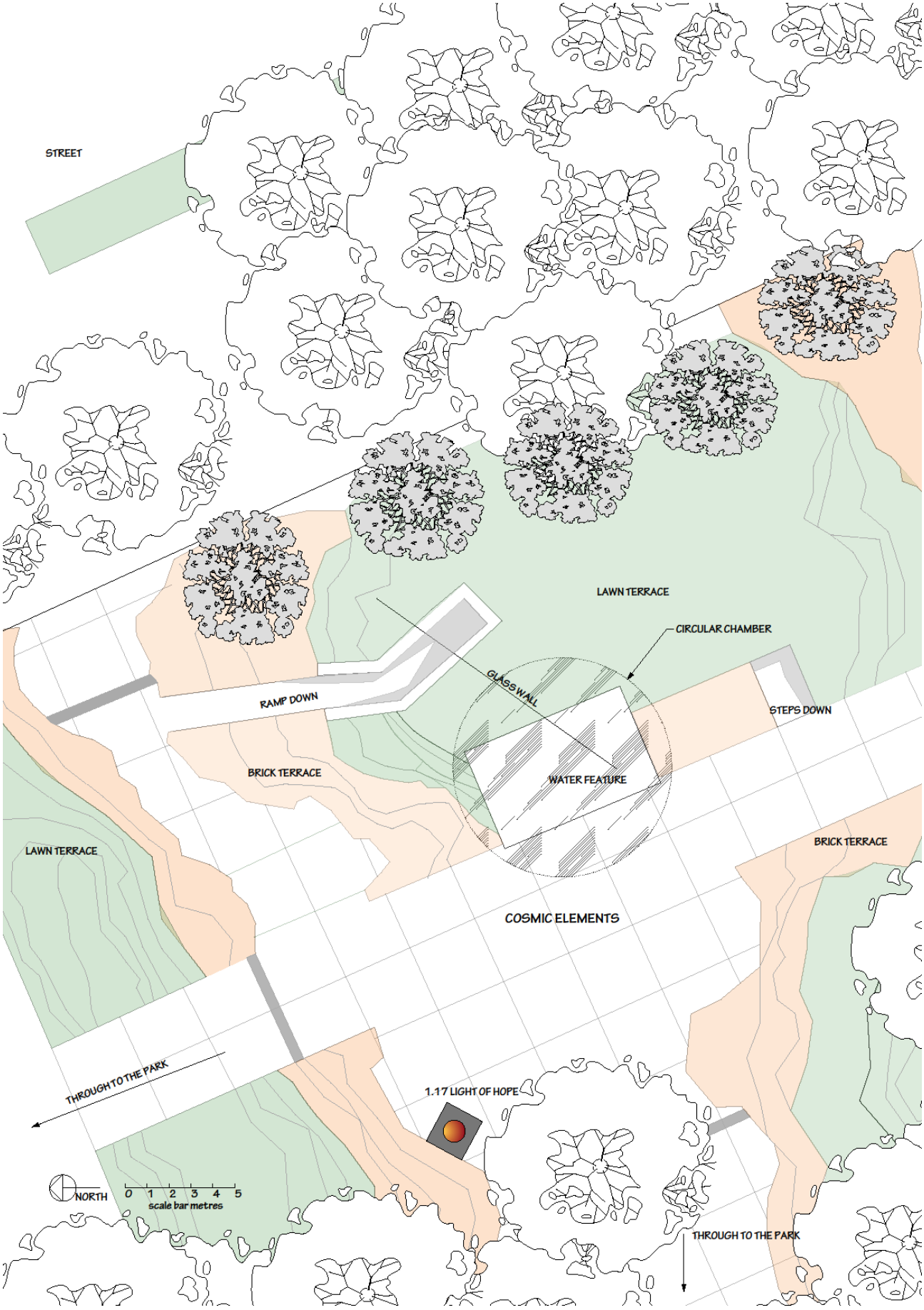


Figure 4.4. Plan of Cosmic elements. Image by Louise Bailey, 2019

Figure 4.5. Inside the chamber the concrete, circular walls are lined with brass panels listing the names of the 6,437 victims. The gold strips are left blank where families could not bring themselves to see the names of loved ones, particularly those of children, made visible. Photo by Louise Bailey, 2019.

Figure 4.6. Terraces, some grassed, appear like contours of the land. Photo by Louise Bailey, 2019.

Figure 4.7. The Light of Hope. Photo by Louise Bailey, 2019.

4.2.2 Port of Kobe Earthquake Memorial Park

LOCATION: Port of Kobe, Meriken Park

DATE OF DISASTER / MEMORIAL: 17 January 1995/2005

NUMBER OF DEATHS: 6437

DESIGNER: Port of Kobe

PURPOSE: Preservation

DESCRIPTION / TYPE: preserved ruin

A remnant section of the port is preserved in its state of destruction where it dropped into the sea therefore allowing the tide to alternate between submersion and revelation (Figure 4.8). The remnant sits off to the water's edge at the entrance of the park and retains the distorted anger of the lamp posts and paving. A boardwalk and white protective railing added around the perimeter allows it to be viewed from all sides, and a small plaque on the seaward side provides a brief history of the park. To be viewed in conjunction with the remnant is a wall of panels that explain in detail the reconstruction of the port, (Figure 4.9). The plan Figure 4.12 shows the memorial in relationship with its immediate surroundings.

CONTEXT: see map of Kobe, Figure 4.2, page 69.

Meriken Park, the name adapted from the Japanese for American "Amerikahito," named after its proximity to the American consulate, more commonly known as Meriken Pier, was originally built in 1987 on approximately 16 hectares of reclaimed land a short distance from the centre of Kobe. Following the 1995 earthquake it was re-built as the Port of Kobe Earthquake Memorial Park as a reminder of the Great Hanshin-Awaji Earthquake. The park is open and exposed to the sun with only a scattering of trees not yet fully grown but the sea breeze provides relief in the high temperatures of summer. Many elements including a water play area, (Figure 4.10), grassed areas and sculptures as well as the open sea views make it a place to be enjoyed and the perfect setting for photographs, as shown in Figure 4.11. A Starbucks café in a central position tops off the commercial attractions.

Figure 4.8. The port preserved as it was post-earthquake. Photo by Louise Bailey, 2019.

Figure 4.9. Looking back to the city of Kobe at the entrance to Meriken Park. The remnant Is highlighted green. Photo by Louise Bailey, 2019.

Figure 4.10. Water play in Meriken Park. Photo by Louise Bailey, 2019.

Figure 4.11. This location in Meriken Park is a highly used photo spot for tourists. Photo by Louise Bailey, 2019.

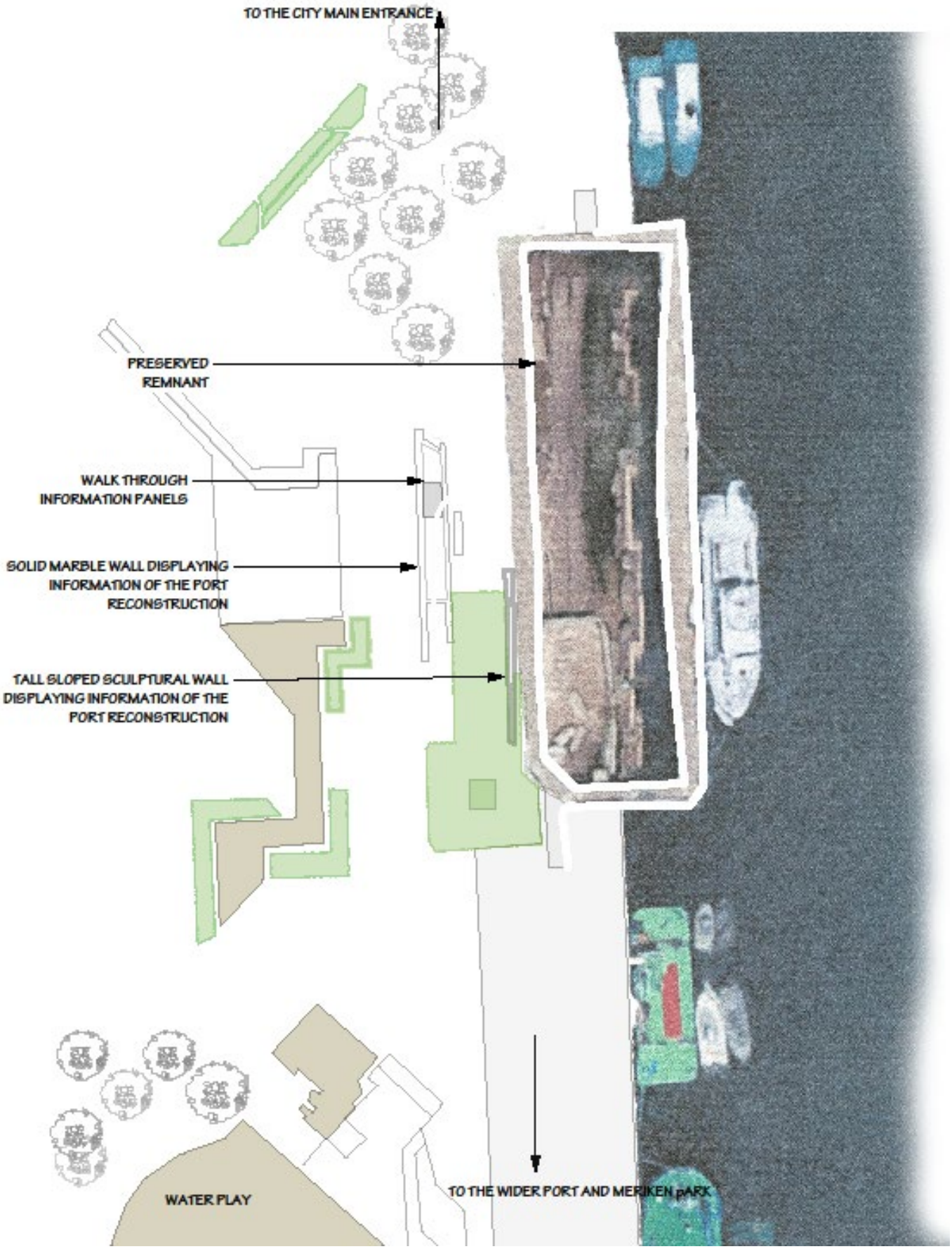


Figure 4.12. Plan of the preserved remnant in Meriken Park, Kobe. Image by Louise Bailey, 2019.

4.2.3 Hokudan Earthquake Memorial Park Nojima Fault Preservation Museum and Memorial to the victims of the Great Hanshin Earthquake

LOCATION: Awaji Island, Hyogo Prefecture, Japan sited on a cliff overlooking the sea (see map Figure 4.13).

DATE OF DISASTER / MEMORIAL: 17 January 1995 / April 1998

NUMBER OF DEATHS: 6437

DESIGNER: Various, including Masayuki Nagare

PURPOSE: raise awareness of natural disaster threats and commemoration

DESCRIPTION / TYPE: Museum and sculptural memorial in the park

The park does not fall within the typical arrangement of a park as its main facility is the Nojima Preservation Museum which exhibits a preserved section of the ruptured fault (Figure 4.14), and a restaurant. The open space provides a paved area for gathering of large groups that arrive by bus and a lawn most of which it taken up by the sculptural memorial by Masayuki Nagare, recognised for his installation at the World Trade Centre, New York. The memorial is dedicated to the memory of the victims nationally (Figure 4.15). The museum includes a house exhibiting the damage that occurred at the time the earthquake struck and a replica living room where visitors can sit and experience a simulation of the magnitude force. Figure 4.16, Figure 4.17, Figure 4.18, reveal the open and more rural context and the memorials and facilities at the site.

CONTEXT: Awaji Island is a 20km drive from Kobe accessed by the Akashi Kaikyo Bridge, a suspension bridge, spanning 13,911 metres with a single span of 1991 metres making it the longest suspension bridge in the world. Awaji Island was the epicentre of the 1995 earthquake. The memorial and museum require a combination of trains, ferry and further buses to reach or by car from Kobe. A loop bus travels around the island also. It is a challenging place to reach and takes some time by public transport, but a destination for those wishing to visit Awaji Island for a range of tourism attractions including the Tadao Ando-designed Awaji Yumbutai, a complex of gardens parks and a conference Centre. Most of the island consists of farmed and forested hills and low-density urban settlements that are dotted along the coastline.

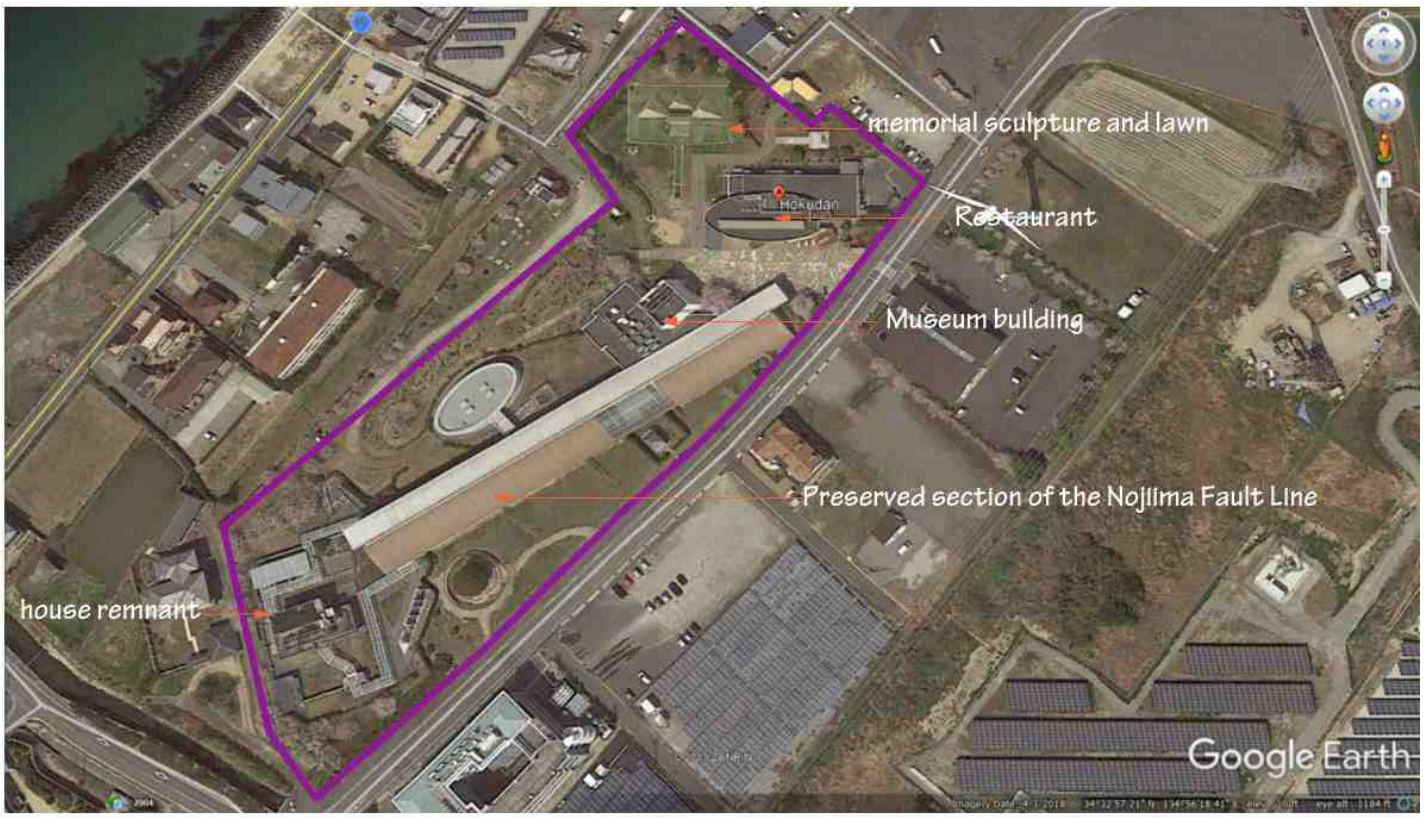


Figure 4.13. Map of Hokudan Earthquake Memorial Park (outlined in purple), on Awaji Island. Image by Google Earth Pro labels by Louise Bailey 2020

Figure 4.14. Hokudan Earthquake Memorial Park; inside the museum a section of the preserved disrupted ground through the fault line. Photo by Louise Bailey, 2109

Figure 4.15. Emperor Akihito and Empress Michiko laying flowers at the memorial. Photo by Louise Bailey, 2019

Figure 4.16. Hokudan Earthquake Memorial Park. Photo by Louise Bailey, 2019

Figure 4.17. A group of students exiting the museum via the forecourt. Photo by Louise Bailey, 2019

Figure 4.18. Memorial to the victims of the Great Hanshin Earthquake. Photo by Louise Bailey, 2019

4.2.4 The Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution

LOCATION: Known as the Disaster Renovation Institution, it is located beside the Kobe Disaster Management Government Building and 100metres from the Japanese Red Cross Kobe Hospital, and 4kms from Meriken Park and the central Sannomiya Station and shopping Centre.

DATE OF DISASTER / MEMORIAL: 17 January 1995 / 2002

NUMBER OF DEATHS: 6437

DESIGNER: Japanese Government

PURPOSE: Dedicated to earthquake risk management and education, featuring a memorial museum.

DESCRIPTION / TYPE: The Disaster Renovation Institution is split into two separate glass buildings adjacent to each other (refer to Figure 1.1 and Figure 1.2). The west building of five floors displays interactive activities and workshops where the public can learn about the 1995 earthquake. A theatre which screens a re-enactment of the earthquake with real video footage, sounds and effective lighting is on the fourth floor along with street scenes after the event. The library is located on the fifth floor. The East building houses another theatre and programmes for learning about the value of water as a source of life and exhibits about the threat of tsunami.

CONTEXT: The area named HAT-Kobe (Happy Active Town) is in Chuo Ward, Kobe, Hyogo, Japan on reclaimed land close to the harbour. Pre-earthquake it was a steel industrial area that was later redeveloped for much needed housing and other industry after the earthquake. The area changed dramatically since the earthquake and is part of a residential housing area with a shopping mall. With a location that is not central and off the tourist route it is not easily accessed by those other than residents of Kobe.

4.3 2011 Tōhoku earthquake and tsunami or the Great East Japan Earthquake

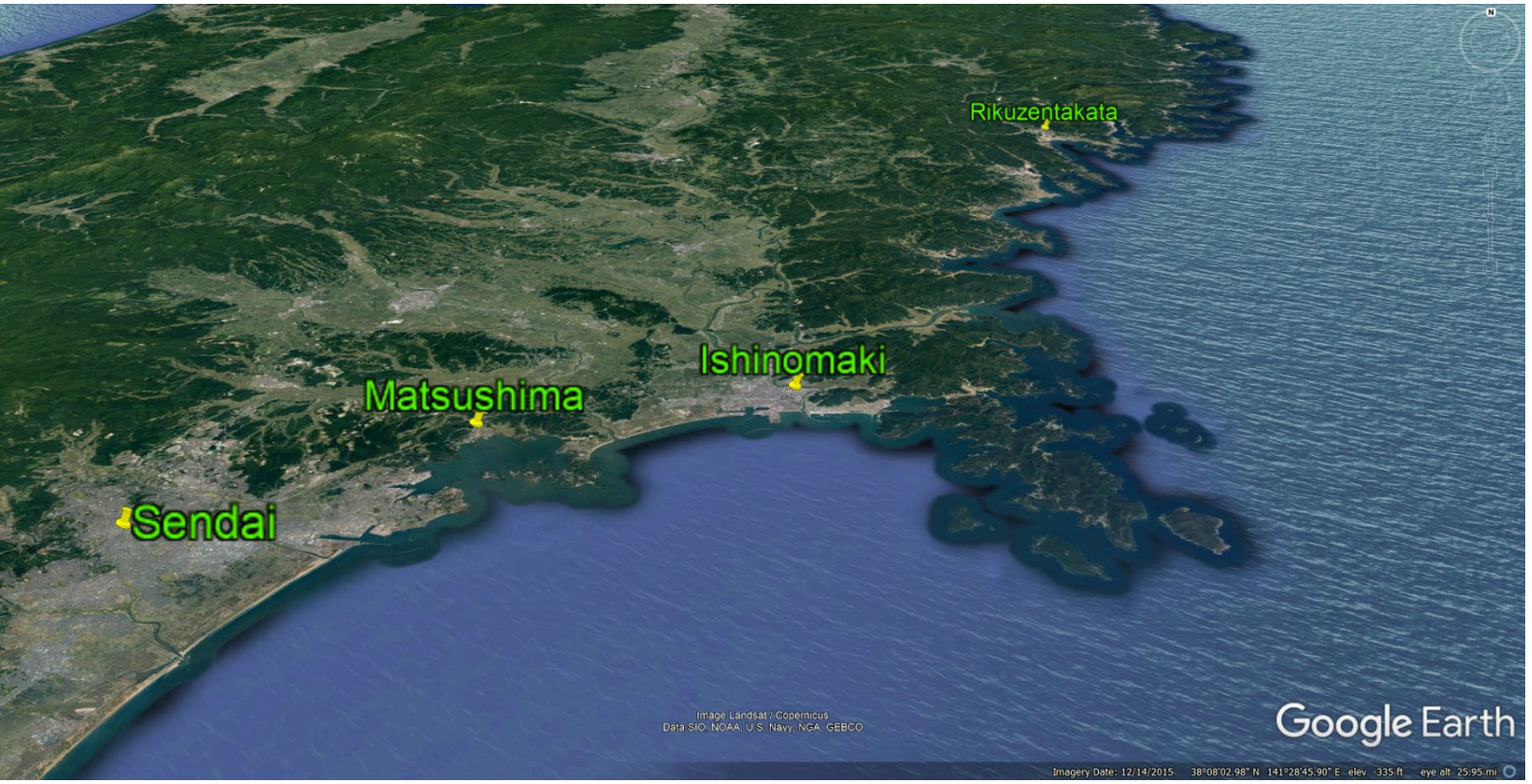


Figure 4.19. Location of sites on the North Eastern coastline of Japan. Image by Google Earth Pro

4.3.1 Sendai, Arahama Elementary School

LOCATION: Miyagi Prefecture, Sendai City, Arahama, approximately 13 kilometres towards the coastline from Sendai City. Originally surrounded by a small residential community, pine forest along the shoreline and farmland.

DATE OF DISASTER / MEMORIAL: 11 March 2011 / 2011-2020

NUMBER OF DEATHS: more than 22,000

DESIGNER: Existing school, built to government standards to withstand strong earthquakes.

PURPOSE: To educate and pass on lessons learned and show the threat of tsunami to future generations.

DESCRIPTION / TYPE: Preserved and retained school building.

CONTEXT: Originally the school (Figure 4.20), was part of the small-town community of Arahama with a population of 2000 people, surrounded by homes, farmland and a coastal pine tree forest located approximately 13 kilometres from Sendai City.

Figure 4.20. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary school. Photo by Louise Bailey, 2019

4.3.2 Miracle Pine, Ipponmatsu

LOCATION: in Takatamatsubara Tsunami Reconstruction Memorial Park, Rikuzentakata, Iwate Prefecture, Japan

DATE OF DISASTER / MEMORIAL: 11 March 2011 / 2011-2020

NUMBER OF DEATHS: more than 22,000

DESIGNER: Naturally occurring**,** preserved

PURPOSE: remnant survivor; reminder and to assist economy

DESCRIPTION / TYPE: A single 15-metre-high pine tree with narrow trunk and sparse canopy (Figure 4.21).

CONTEXT: see map Figure 4.22

The Miracle Pine stands in its original location, although it is no longer a living tree and in a sense taxidermized and preserved. It is located as a stand-alone sculpture, surrounded by a low fence, on the city side of the newly constructed 12-metre-high sea wall adjacent to a ruin in the Iwate Tsunami Memorial Park. In close proximity is the memorial museum, which was opened in September 2019, shown in context Figure 4.23.

Figure 4.21. The Miracle Pine, a survivor, prior to the redevelopment of the site. Photo by Louise Bailey, 2019

Figure 4.22. Plan of Rikuzentakata re-development. Photo of a plan on display

Figure 4.23. The Miracle Pine stands out in the centre of the photo against the backdrop of the sea wall. Photo by Louise Bailey, 2019

4.3.3 Ishi-no-kinendo, Ishinomaki Memorial to the victims of the 2011 Earthquake

DISASTER: 2011 Tōhoku earthquake and tsunami or the Great East Japan Earthquake,

LOCATION: Sited in the remote Saragai village, 36km north of Ishinomaki, on a hillside above the village, (Figure 4.24). A local cemetery and temple are at the base of the hill where the road into the village terminates. The cemetery is managed by a bicycle-riding monk living in a modern house within the temple grounds. The memorial is sited on the edge of a terraced hill accessed by timber and bark steps cut into the hillside. Above the memorial is a small timber prayer room, and a small playground with a flying fox, (Figure 4.25). The location is shown on the map Figure 4.28, in association with Okawa Elementary School.

DATE OF DISASTER / MEMORIAL: 11 March 2011 / 2015

NUMBER OF DEATHS: more than 22,000

DESIGNER: Noritaka Ishikawa, architect with Koishikawa Architects Co. Ltd. In collaboration with Yoshiyuki Kawazoe, Associate Professor, Institute of Industrial Science, University of Tokyo.

PURPOSE: memorial for commemoration and place of prayer

DESCRIPTION / TYPE: The memorial is fan shaped like the Japanese uchiwa and is made up of 18,000 slithers of basalt stones, salvaged from the destruction, each representing a victim in the tsunami. The stainless-steel top catches rain that falls to the centre and drips to a channel below and is etched with a map of the region overlaid with radiating lines stretching in the direction of the affected towns and villages, (Figure 4.26 and Figure 4.27).

Figure 4.24. Ishi-no-kinendo on the hillside above the farming village. Photo by Louise Bailey, 2019

CONTEXT: In a rural community surrounded by pine forest the site was cleared of vegetation and lies adjacent to a cemetery and temple.

Figure 4.25. Information signage at the memorial site Ishi-no-kinendo showing steps up the slope to the central memorial. Photo by Louise Bailey, 2019

Figure 4.26. The stainless-steel inlay, displaying the regional map and direction of areas affected by the earthquake and tsunami. Photo Louise Bailey,2019

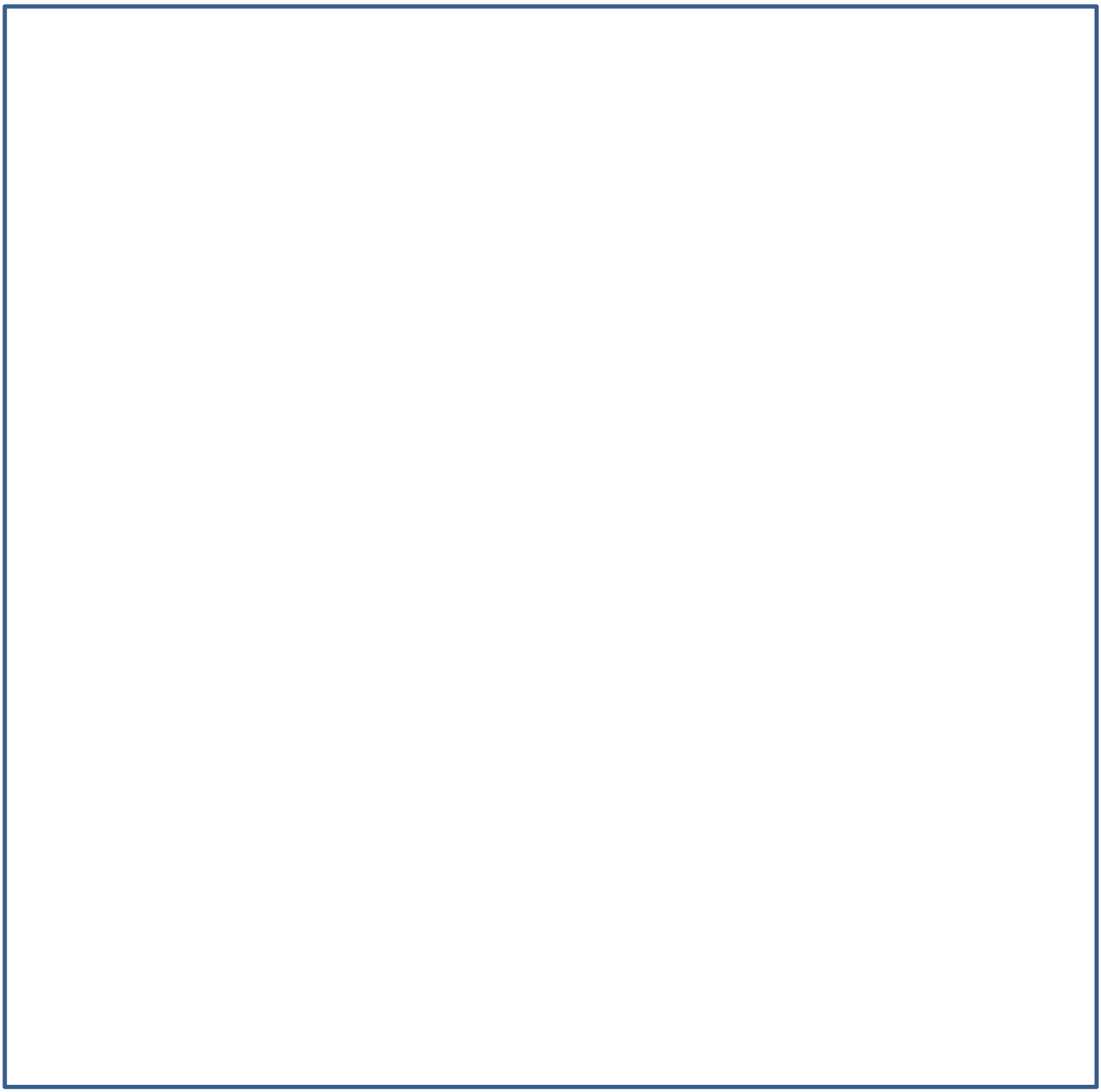


Figure 4.27. Concept plan of Ishi-no-kinendo memorial in its immediate context and radiating lines to towns and villages affected by the tsunami. Drawing by Hiroya Kobiki+Noritaka Ishikawa/Koishikawa-architects, accessed from https://www.dezeen.com/2016/02/08/stone-memorial-koishikawa-architects-2011-japan-earthquake/ This image is not available due to Copyright.

4.3.4 Okawa Elementary School

LOCATION: Okawa Elementary School, Kamaya village (no longer a village) on the Kitakami River is 6kms inland from the coastline and 25kms from Ishinomaki. The bulk of the school classrooms and remains of the gymnasium are being preserved as a memorial to the children and teachers who died in the tsunami. The location is shown in Figure 4.28 in relation to Saragai Village.

DATE OF DISASTER / MEMORIAL: 11 March 2011 / 2019 incomplete

NUMBER OF DEATHS: 70 of 108 students and 9 of 13 teachers and staff

DESIGNER: Ishinomaki City, Miyagi Prefecture in collaboration with a Tokyo designer (name unknown)

PURPOSE: Preserved as remnant, commemoration

DESCRIPTION / TYPE: The school that once provided an education for the young children of the Kamaya village and nearby rural community village will be preserved as a memorial to the lives lost. The grounds were decimated in the tsunami and were only recently cleared as families continued to search for the bodies of children with some still not found to date. The buildings are mostly bare and open to the elements as windows and walls on both levels caved-in with the force of the tsunami, (Figure 4.29). The buildings encircle a courtyard space where the children used to play and ride their bikes. Remnants of paving are visible through the scrapings of debris and overgrown grass which invaded following the clean-up. Twisted steel and reinforcing in the building gapes, with a tired memory of the force of nature.

The entrance to the site, (Figure 4.30), is clear although not yet formalised and is marked by a line of small spontaneous shrines and memorial messages. The track into the school grounds is gravel and dusty. Car parking including spaces for the many tour buses that visit the memorial is across the road in a cleared unformed gravel area. There is no direction given to the course to be taken and visitors are free to wander other than entering the buildings. Adjacent to the school buildings is a small, forested hill where most of the children were prohibited from climbing prior to the tsunami strike, (see the view from the hill Figure 4.31). However, two boys ignored the restriction and survived by climbing to higher ground. A legal battle is ongoing as the government and victims' families resolve to lay blame for the deaths that could have been avoided.

CONTEXT: Set in a rural community 30 minutes' drive from Ishinomaki in a wide Kitakami River valley. Immediately behind the school is a range of low forested hills and hills to the far side of the valley. This is now a destination as there are no other tourist attractions nearby and it is not on

route to other places. The families of the victims value the place and maintain the grounds. Evidence is shown in small flowering garden plots and toys displayed as reminders that this was a place of happiness for the children.

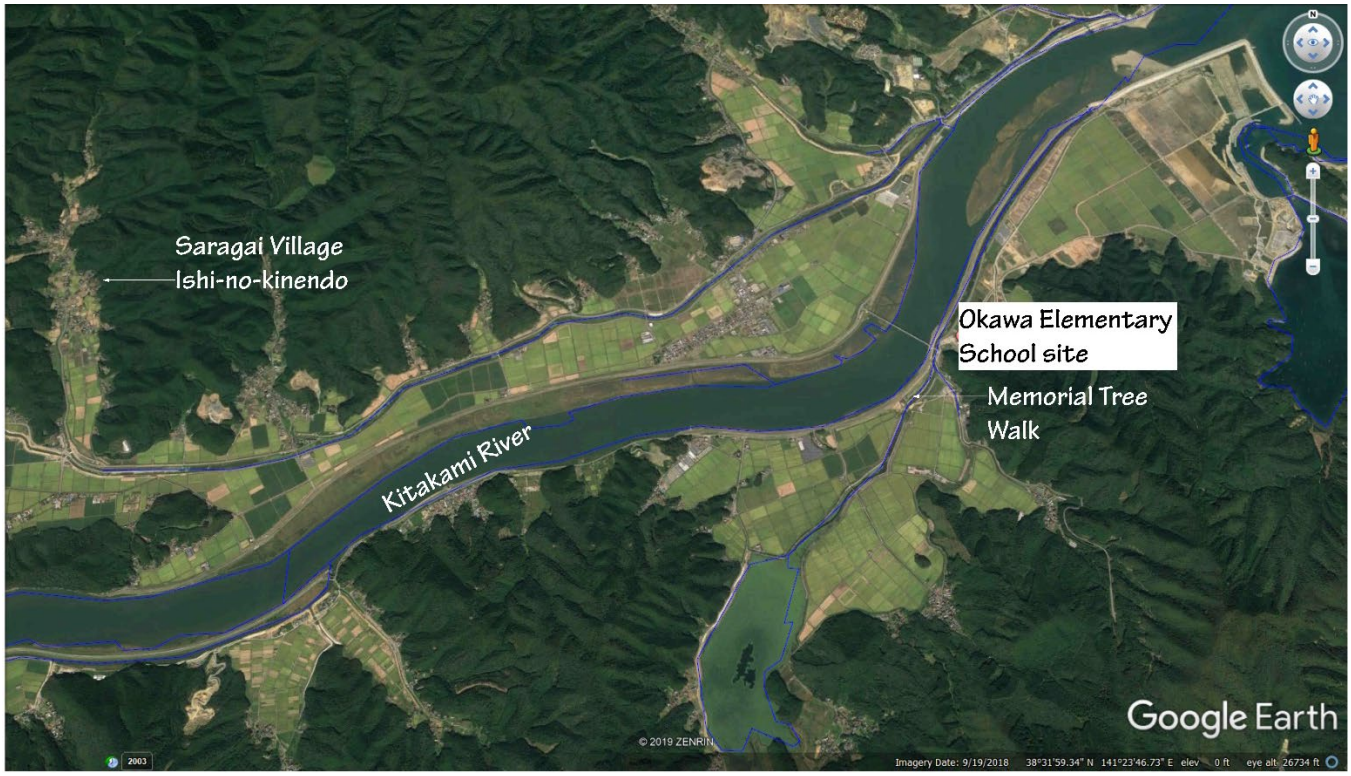


Figure 4.28. Map of Okawa elementary School and Saragai Village. Image by Google Earth Pro, labels by Louise Bailey, 2020

Figure 4.29. Okawa Elementary School with the Kitakami River in the background. Photo by Louise Bailey, 2019

Figure 4.30. The entrance to the grounds with a collection of memorials and shrines. Photo by Louise Bailey, 2019

Figure 4.31. Okawa Elementary School memorial viewed from the adjacent hill. The marker pole in the centre indicates the height of the tsunami. Photo Louise by Bailey, 2019

4.3.5 Ishinomaki and Rikuzentakata sea wall

LOCATION: A sea wall on the coastline of Rikuzentakata and Ishinomaki and along the 500-kilometre Sanriku coastline from Fukushima to the north.

DATE OF DISASTER / MEMORIAL: 2011 / 2019

NUMBER OF DEATHS: 1763 locally

DESIGNER: Government

PURPOSE: protection of towns

DESCRIPTION / TYPE: The sea walls along the coastline mostly been re-built at 12-metres high are constructed in concrete. Many include a road along the top, although it is not for public use, and steps that allow access to the sea front. The walls are sloped and in Ishinomaki a road runs along the inner safe-zone edge where industry and housing were rebuilt after the towns destruction (Figure 4.32, Figure 4.33). The walls are highly visible in the landscape, but as planted pine forests grow in Rikuzentakata the visibility will be reduced, but the sea walls in Ishinomaki will remain highly visible as a marker and an abrupt edge to the urban form and the natural coastal landscape.

CONTEXT: The two walls included as case studies are typical of the walls along the coastline although their proximity to areas of habitation is different. In Ishinomaki the town centre was already set back from the coastline but sits on the side of the Kitakami River making it vulnerable to tsunami as they travel up the river. The new sea wall along the coastline is largely located in an industrial area including a pulp and paper mill. Rikuzentakata lies in a valley alongside the Kesen River and the town had been built on low lying flat land near the river mouth. The township is relocated to higher ground further back from the coastal edge with many residences rebuilt on the surrounding hills. Low-lying areas are reconstructed as a levee with the wall on the coastal edge and the rebuilt town on the other side on high ground (Figure 4.34). Farming mostly occupies the levee and the new Museum is built on higher ground within the levee. Material to form the sea walls was brought in from surrounding hillsides and in Rikuzentakata a complete hillside was brought down to the shoreline via a conveyor belt.

Figure 4.32. Top, Ishinomaki looking to the road from the top of the sea wall. Photo by Louise Bailey 2019

Figure 4.33. Below, the same wall in Ishinomaki, the pulp and paper mill to the far right. Photo by Louise Bailey 2019

Figure 4.34. Looking aver Rikuzentakata foreshore from the adjacent excavated hill. Photo by Louise Bailey, 2019

4.3.6 Sendai safe stations- tsunami vertical evacuation (TVE)

MEMORIAL AND LOCATION: Various structures placed along the east coastline in the Tohuku Prefecture

DATE OF DISASTER / MEMORIAL: 2011, some in place pre-tsunami 2011 and more built following the event.

NUMBER OF DEATHS: more than 20,000

DESIGNER: Sendai City, local government

PURPOSE: to act as a safe place in the event of a tsunami as a temporary shelter until other help is available.

DESCRIPTION / TYPE: Designs vary but most along the Sendai Coastline are a steel frame structure that water could pass under with external stairs and a platform at the top often providing a toilet, (Figure 4.35).

CONTEXT: The structures are placed in areas where people may not be able to get to higher ground. At this stage in Sendai there was no development in the area as roading was in the final stages of completion however about 70 households that remained can access the tower.[222]

Figure 4.35. A safe station in Sendai with an enclosed floor that contains food water, sanitation, and warmth for evacuees for a short period of time. Photo Louise bailey, 2019

[222] (Bureau, 2017)

4.4 Christchurch Earthquake

Figure 4.36. Map of the South Island, New Zealand, showing the location of Christchurch, Kaikōura, the snow-capped southern Alps and the West Coast. Image, Google Earth Pro

4.4.1 Oi Manawa Canterbury Earthquake National Memorial

LOCATION: Christchurch, New Zealand, see context map Figure 4.36.

DATE OF DISASTER / MEMORIAL: 22 February 2011 / February 2017

NUMBER OF DEATHS: 185

DESIGNER: Slovenian architect Grega Vezjak. Chosen from 330 submissions in an open competition.

PURPOSE: Commemoration- "a place to remember and to find peace"[223]

DESCRIPTION / TYPE: The memorial follows a 150metre length of the Ōtākaro Avon River and forms an edge to the river on the south bank, (see plan Figure 4.39). On the south side, (Figure 4.37), there is an upper promenade at street level where people can walk past the memorial without entering it. The lower promenade descends a flight of steps at Montreal Street and ramps back up to street level

[223] (Vezjak, 2017)

at the eastern end. The lower basalt terrace is linked to the north with steps leading to the water's edge and a 3.6-metre-high white Italian marble wall made up of 517 panels forming the backdrop. Etched into the marble wall are the names of the victims at eye level and a brief explanation of what happened, and a message of remembrance is etched at the east end of the wall. The north bank of the river was moderately modified post-earthquake adding a curved bench seat and associated path and the gradually sloped bank is planted with low growing New Zealand native species. A grove of long-established trees on the north park area provides a sense of enclosure and a green canopy in summer. The north bank eastern end is considered the main entrance especially at times of ceremonial procession when a pounamu touchstone placed at street level can be touched prior to entering the memorial. The stone sprays a soft jet of water which to Māori is a cleanser of the soul and was gifted by Te Runanga o Makaawhio and sourced from south Westland. The top of the stone forms a shallow basin where the surrounding trees and clouds above are reflected in the pool.

CONTEXT: The greatest amount of damage and lives lost in the earthquake was in the central business district of the city and the memorial is sited within that area but not at a specific place where lives were lost. In the regeneration of the central city, planning addressed the Ōtākaro Avon River as a highlight and identity of the city that should be celebrated, and a river corridor plan was implemented creating a city to sea path for recreation that exposed the area's heritage. The memorial links Christchurch Public Hospital and the historic boatsheds to The Terraces in the hospitality hub of the city and is located within walking distance of many visitor attractions including Quake City, the museum of the earthquake, Canterbury Museum, the Arts Centre, Christchurch Botanic Gardens and Hagley Park (Figure 4.38).

Figure 4.37. Oi Manawa, south bank curved memorial terrace and wall and opposite north bank. Photo by Louise Bailey, 2020

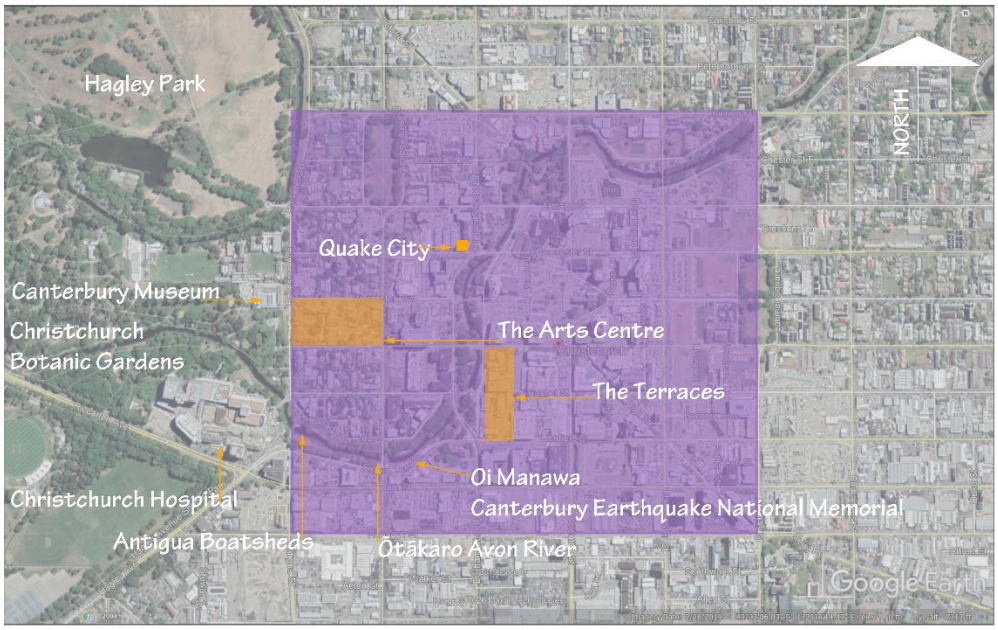


Figure 4.38. Map of central Christchurch and proximity of Oi Manawa to related places. Image by Google Earth Pro, labels by Louise Bailey 2020

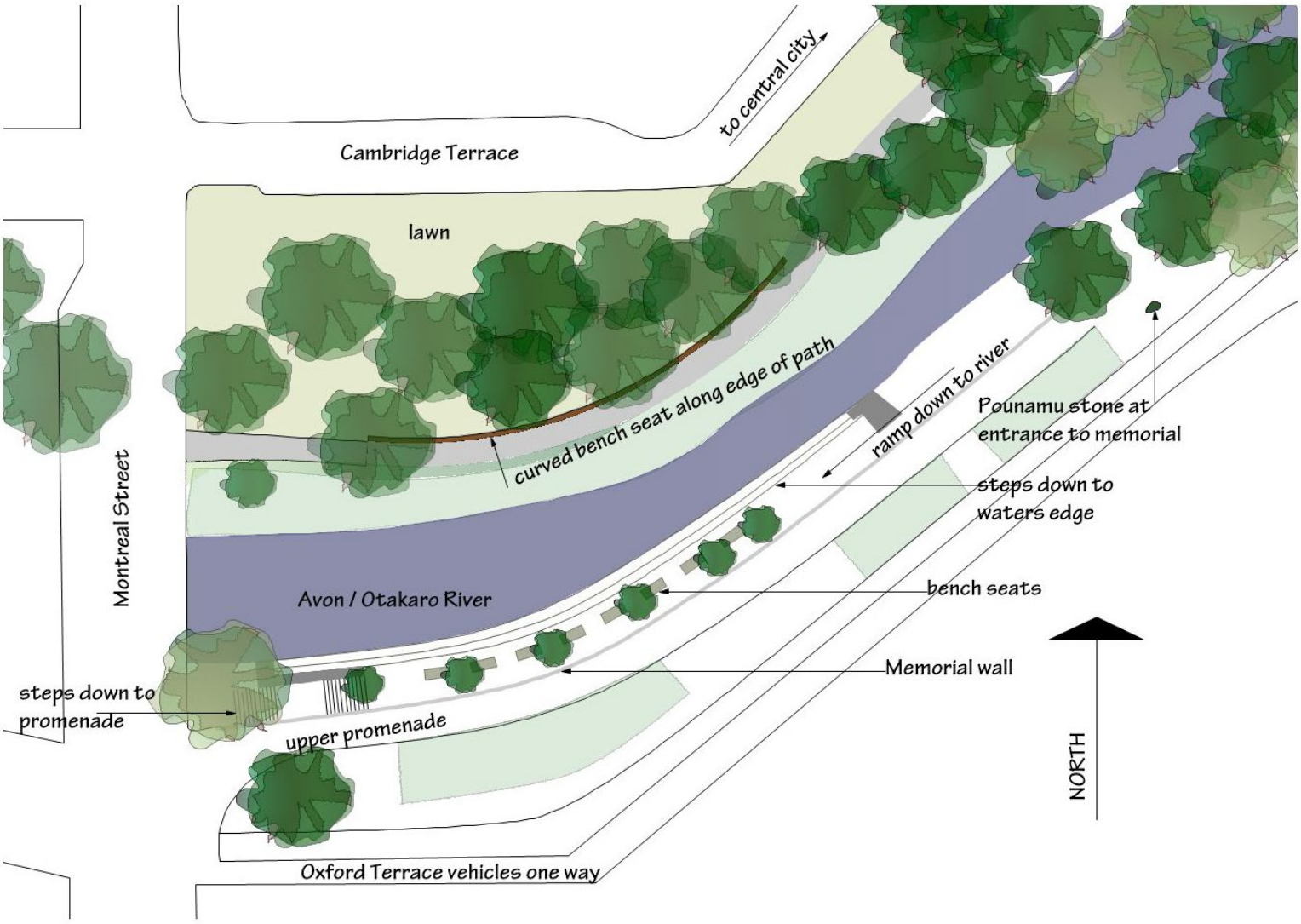


Figure 4.39. Plan of Oi Manawa, Canterbury Earthquake National Memorial. Image by Louise Bailey, 2020

4.4.2 Quake City

LOCATION: Christchurch, New Zealand. (see map

DATE OF DISASTER / MEMORIAL: 22 February 2011 / February 2013

NUMBER OF DEATHS:

DESIGNER: Canterbury Museum **–** Government

PURPOSE: Tourism, Attraction[224]

DESCRIPTION / TYPE: Small, self-contained museum telling stories of the earthquake and displaying objects destroyed and providing an account of the re-build of the city. Figure 4.40 shows an internal display in the museum.

CONTEXT: Situated to the north of the Arts Centre and Canterbury Museum on the route of the Christchurch Tram City Tour although to the north of the direct tourist walking route between the central city and other key tourist sites. It was initially installed at a temporary location in the central city retail area then moved to its current permanent location.

Figure 4.40. Inside Quake City displaying a photograph of Oi Manawa. Photo by Louise Bailey, 2019.

[224] (Canterbury Museum, 2020)

4.5 Kaikōura Earthquake

4.5.1 State Highway 1

LOCATION: New Zealand, South Island, north and south of Kaikōura

DATE OF DISASTER / MEMORIAL: November 2016/2020

NUMBER OF DEATHS: 2

DESIGNER: New Zealand Transport Agency

PURPOSE: road transport

DESCRIPTION / TYPE: During the earthquake close to a million cubic metres of rock and material fell from the hills along this coastline onto the main arterial road and rail lines blocking off transport north and south along the east coast of the South Island. Along the coastline, 194 kilometres of road was damaged by 85 landslides. Some of these are indicated in Figure 4.41.

CONTEXT: Kaikōura coastline is rich in ecological diversity in both marine and terrestrial environments and is valued for its scenic beauty. Restoring the road for communications and to aid the economy was a priority but care was taken to ensure that environmental, cultural and scenic qualities were retained. The road along the coastline is abutted on one edge by the sea and on the other by steep mountains making it a narrow road as it winds around the foot of the mountain range (Figure 4.42). Repairs to the road are almost complete after three years of reconstruction.

Figure 4.41. The Kaikōura coastline showing the slips onto SH1. Image source: https://www.nzta.govt.nz/projects/kaikoura-earthquake-response/ video Kaikoura earthquake recovery – our story.

Figure 4.42. The newly constructed SH1 hugs the coastline. Photo Louise Bailey 2019

4.6 Conclusion

The details assembled for each case site provide the base information for critique in Chapter 5 and in many instances, images will be referenced in the following chapters.

Chapter 5 Site Critique – findings

Introduction

Having gathered the material as presented in Chapter 4, Chapter 5 now goes on to analyse the findings from each of the sites. A broader range of information from the memorial sites is set out under specific headings, with some memorials being mentioned in more than one section or theme as they relate to different attributes. The chart of typologies, Table 3 shows a range of themes explored in the study, and the darkened blocks indicate where each memorial meets with criteria of a sub-category. The list of memorials considered for their thematic attributes was originally thirty-one in total, and of those seventeen were sites in Japan and the balance spread between New Zealand, Rwanda, New Orleans and Indonesia. The greater initial number of memorials although contributing to the overall study repeated similar information, and the fourteen sites in the chart provide clear examples having been selected for a particular criterion relating to approach, spatial, messages, interpretation and emotions as discussed in Chapter 3.3.5. Following the critique method of Attoe,[225] and applying a descriptive approach for each site, the intention of the memorial became a more notable feature. Designation of sites into sub-categories opened the possibility of examining how a memorial functions, what it offers the visitor within its function and its spatial performance within its context.

The final fourteen memorials, of which eleven were in Japan and three in New Zealand, selected for more detailed study were further categorised for more specific discussion that became apparent through analysis of sites. All the memorials listed include an element of 'not forgetting', ranging from those that are explicitly designed for remembrance and others where 'not forgetting' is less prominent. The descriptive critique will be discussed further in the category of intention or message of these memorials that fit typically under each heading.

Table 4, page 129, categorises the intended message of the memorial into five headings that signify the message that is prominent at each of the sites: Sanctification, Education, Tourism, Warning / Protection and Marker or Revelations. Not Forgetting is inherent in all of these messages with most have a strong emphasis remembering.

[225] (Attoe, 1978) p.85

| | | |

5.1 Approach to classification

All memorials in the study are categorised as either being **purpose-made**, that is designed and built with a purposeful intention following a disaster or remodelled from an existing place or structure, or an existing place or piece **retained** as the memorial or the memorial is a **remnant** left behind and in time becomes a **ruin**. **Purpose-made** memorials are those built post-disaster with an intended purpose that is listed under 'messages' on the chart. This type of memorial is easily categorised by the date of its inception as indicated in the generic information of each memorial in Chapter 4, outlining descriptive information observed on site and from the literature. Memorials that are not **purpose-made** are either **retained** in their original, destroyed state at the time the disaster struck or are a **remnant** from something that existed before or a building, park or object **remodelled** and re-purposed following the disaster. Completed fields on the chart show that nine of the memorials were **purpose-made,** which may reflect a design decision to build a new memorial for the affected community or it may indicate the level of destruction in these places and scarcity of buildings or places suitable for re-purposing.

Five of the memorials in the study are not **purpose-made** and fall into the more obscure category of **remnant** and a place **remodelled** or **retained** and is not a **ruin**. In recalling the theory of ruins, Bowring reminds that the ruin is achieved through a passing of time from a structure that may be observed as the Beautiful prior to its declined state and holds a hybrid appeal of the Beautiful, the Picturesque, and the Sublime.[226] One memorial, Hokudan Earthquake Memorial Park and Earthquake Memorial Museum contains a piece of ground that lies on the fault line and shows the resulting displacement of the land at the time the earthquake struck (Figure 4.14, page 77). This memorial is included in both the purpose-made and remnant columns in the chart. Figure 5.1 shows that purpose made memorials were the dominant type amongst the sites studied.

[226] (Bowring, 2017) p.111

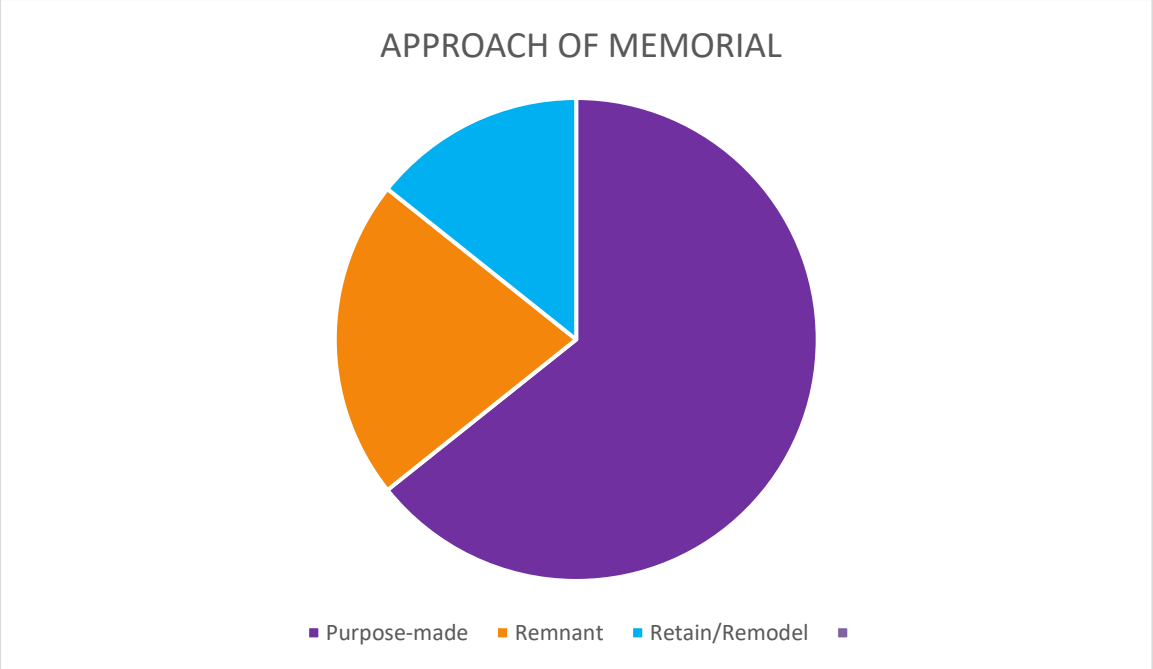


Figure 5.1. Indicates the scale of purpose-made memorials in relation to those that were left as a remnant or retained.

5.1.1 Remnant

The Miracle Pine, (refer to Figure 4.21), was in a sense established subsequent to the 2011 tsunami. With a lost context or place it could be considered an object on a plinth and is retained as a remnant from a forest where it once stood together with other pine trees. As a lone standing survivor of the tsunami amid the debris it had context being sited alongside the remains of similarly surviving relics. Most of the relics have been removed and the tree is given a new life, a new context, adjacent to the recently opened Iwate Tsunami Memorial or Ipponmatsu. The Pine was marvelled at by the people of Rikuzentakata as the forest of 70,000 pine trees in which it dwelled was destroyed and it alone remained resolute amongst the devastation. The townspeople decided to preserve it as a reminder of the tragedy and a symbol of encouragement. However, in the years passed since the tsunami the tree slowly died due to seepage of saline water. The bark was removed, and a mould taken of the tree then, the bark was placed over the replica trunk with its replica foliage. Seeds were taken from the tree and propagated to replant in the area and will reach the same height of the Miracle Pine (20metres) in 15 years.

Rikuzentakata is a small coastal town in an area that is less popular with tourists visiting Japan. A 2-kilometre-long foreshore of beaches was enjoyed for recreation. At the time of my visit, eight years after the event, the town was functioning although the gaps of unbuilt sites and major earthworks emulated that of a new subdivision with a small commercial centre. Typical of the rebuild of many of these coastal towns, the new town centre is set well back from the coastline on higher ground, and

the area still vulnerable is reconstructed with a higher sea wall and levee, (refer to Figure 4.34). The Miracle Pine now stands in a memorial park in the levee alongside the Iwate Tsunami Memorial which opened 22 September 2019, only weeks after my visit.

The object stands where it survived but will not hide in a forest as it once did. It stands alone surrounded by a low fence as a symbol of hope and resilience and as an attraction for visitors to the town. Mayor Toba declared that Rikuzentakata will renew interest for visitors which would bring tourism spending and benefit the economy of Rikuzentakata.[227] He launched a powerful story centred around the survival of the tree to attract people to the town.[228] My Guide, Hazuki Kumagai, a recent university graduate, said that the younger generation wants to live in the bigger cities that are more exciting, and that the town's population is struggling to come back to pre-tsunami numbers. Many evacuated as their work and homes had gone, settling in new places. Amya Miller who was appointed as Rikuzentakata public communication director declared that "the Miracle Pine is a powerful symbol for the town and it conveys a message of hope, akin to the Hiroshima Dome."[229] The pine serves a purpose both as a reminder of past tragedy and a hope for a more resilient future, a resilience that encompasses preventative measures to ensure safety as well as a stronger economy through tourism. The Miracle Pine was included on the 2020 Tokyo Olympic torch relay, now cancelled due to the global pandemic COVID-19, which also included the Hiroshima Peace memorial Park and J-Village in Fukushima Prefecture.[230] It is questionable whether this space provides personal and common values as Kelley proposed.[231] Perhaps like Hiroshima with its associated Peace Memorial Museum, Rikuzentakata with their Miracle Pine and Iwate Tsunami Memorial museum will move people towards an empathy of the loss, absence and emptiness felt by the people of the Iwate Prefecture.

The Miracle Pine is in a highly public place with the potential to be visited by large numbers of tourists. Funds to preserve the tree in sculptural form were raised by the community, and donations were collected via a Facebook page. There was considerable debate and anger over the cost of preserving the tree, NZD 2 million, and negative comments suggesting that funds would be better utilised on assisting people in the recovery, were removed from the Facebook page.[232] Visitors cannot touch the memorial, they can only stand back on the other side of the protective fence and wonder at a distance. Janet Donohoe explains 'authenticity' in monuments as a disruption in "our

[227] (Kittaka, 2015)
[228] (Martini & Minca, 2018) p.12
[229] (Martini & Minca, 2018) p.17
[230] (Kyodo News, 2019)
[231](Kelley, 1994) p.142
[232] (Phro, 2013)

satisfaction in daily life with a sense of anxiety about our own mortality and confront us with the space for public discourse."[233] It is questionable whether the tree alone raises any public discourse and anxiety about our mortality but adjacent to the tree is the memorial museum which provides a wealth of information about the tsunami and the suffering and recovery of the people of Rikuzentakata. In evaluating the success of a memorial is it enough to consider the two factors of its high vistation and community efforts in fundraising? Young (1998) suggests not, and believes that there should be a multiplicity of levels in the process and community engagement in all facets of the design is important to its success. The tree is a wonder and, although its survival was short-term and is now immortalised, it lives on as a legend and symbol of hope.

5.1.2 Ruin

It is questionable as to whether the Port of Kobe Memorial in Japan falls clearly into the category of ruin or whether it is a remnant. With the passing of time since the 1995 Great Hanshin Awaji Earthquake the section of street on the wharf has fallen into what Florence Hetzler, philosopher, in writing about the unique qualities of a human-made structure left to the whims of nature terms 'ruin time,' "a temporal interlude in which a damaged structure loses its raw and painful appearance."[234] It is in transition to becoming a ruin, no longer a remnant and not yet a ruin in a "maturation time."[235] The tidal waters ebb and flow into and over the remains of the old wharf which remains crumpled and distorted as it fell in the earthquake. Paint on the lamp posts, Figure 5.2 and Figure 5.3 is fading, a guard rail lies rusting and clumps of smooth stones set in concrete lay strewn amongst broken concrete path segments. The tide gently washes it clean twice a day. In its own 'ruin time' the succumbing of a man-made structure to nature tells the tale of the past within a created "peace that is absent in the case of a devastation, where the human-made and the nature-made are not one but separate."[236]

A small plaque on the seaward side of the walkway surrounding the ruin explains its history. Immediately adjacent to the ruin, a memorial wall walkway provides a historical account of the wharf and its reconstruction post-earthquake. No reference is made to the lives lost in the earthquake with the focus solely on the wharf. The ruin is located at the entrance to Meriken Park and is easily walked past accessing the wider park area. Visitors may choose to stop and remember, and others walk past to a range of activities within the park. The memorial performs a specific function to reveal the destruction that occurs in a devastating earthquake and provides the

[233] (Donohoe, 2002) p.240
[234] (Bowring & Swaffield, 2013) Para.9
[235] (Hetzler, 1988) p.52
[236] (Hetzler, 1988) p.54

opportunity for reflection. It does not perform as a place for annual ceremonial remembrance as Higashi Yuenchi Park a short distance away takes that role, but it is a visual reminder of a past that is certain to re-occur.

Figure 5.2. Port of Kobe Memorial in 'ruin time'. Photo by Louise Bailey 2019.

Figure 5.3. Ruins as they fell in the 1995 Great Hanshin Awaji Earthquake submitting to nature. Photo by Louise Bailey 2019.

5.1.3 Leavings

Bowring discusses the melancholic quality of 'leavings':

> 'Leavings' are melancholy doubled. First, leavings are poignant actions: departures, abandonments, desertions. And second, leavings are those things which are left, the remnants of something previously whole: detritus, residue.[237]

An example of 'leavings' was found at Okawa Elementary School in Japan. Much of the debris from the tsunami had been cleared away at the time of my visit, and the grounds had been scoured for the bodies of the missing children on a relentless daily basis for years following the disaster. Unrecognisable fragments of items are revealed in the landscape. Pieces of objects that were once part of the lives of the children and teachers lay partially buried in the grounds and hint at further leavings that may lie beneath.

Figure 5.4. 'Leavings' in the track up the hill at Okawa Elementary School. Photo by Louise Bailey 2019.

These small and unexpected fragments catch the eye and trigger "involuntary memory", and "leavings can sabotage the most innocent of gazes."[238] The 'leavings' found in the path, Figure 5.4, a sliver of glass, blue plastic and pieces of tiles are out of their ordinary context, and if found in isolation of the school and unrelated to the tsunami would not sabotage the 'innocent gaze'. There is a connection or a link that triggers the mind to wonder what these things were, and who came in

[237] (Bowring, 2017) p.117
[238] (Bowring, 2017) p.117

contact with them "pointing to an elsewhere that is no longer."[239] The traces left by the children and teachers in murals on the back wall of an amphitheatre and a small water basin possibly to wash feet before entering the amphitheatre, leave melancholic traces of a past people and their activities, and their absence is visible (Figure 5.5, Figure 5.6, Figure 5.7, Figure 5.8). The obvious nature of the school and its 'leavings' renders it open to mourning. There is little that cannot be mourned.

Figure 5.5. Above, possibly 'leavings' at Okawa Elementary School. Photo by Louise Bailey 2019.

Figure 5.6. Right, detail of a child's toy. Photo by Louise Bailey 2019.

Figure 5.7. The rear wall of an amphitheatre. Photo by Louise Bailey 2019.

[239] (Trigg, 2006) p.29

Figure 5.8. The same wall of the amphitheatre with a water basin. Photo by Louise Bailey 2019.

5.1.4 Purpose-made.

The term purpose-made is contrived to differentiate the greater number of memorials that were built with the intention of them being a memorial (refer to Figure 5.1). This description sets it apart from the remaining memorials that have evolved from something that previously existed. Examples that are solely purpose-made and do not cross-over other categories of 'Approach' are Cosmic Elements in Kobe and Oi Manawa Canterbury Earthquake National Memorial. There is no ambiguity of the intent or purpose of these memorials as the first is specifically designed by an artist and the latter is the winning entry of a Government led design competition. Table 3 indicates a similarity of messages from these two memorials with the exception of Oi Manawa that has a tourism component

5.1.5 Retain / remodel

In her discussion of the uncanny Bowring opens the chapter stating that, "the uncanny – is inherently melancholy."[240] The uncanny is that which is unexpected, the normal that is weird or misplaced in a different context. In relating paintings, film and the Russian Formalists (who worked to estrange or defamiliarise in literary language), Bowring states that "making something strange is taking the familiar and making it unfamiliar, or defamiliarisation, a practice which echoes the strategy of repetition, of re-presenting something known in a way which makes us re-see it as unknown, or to use Freud's term, 'novel'."[241] A somewhat obscure example of the uncanny lies in the slice of land that is housed at the Awaji Island National Natural Earthquake Memorial (Figure 5.9, Figure 5.10). It is understandably named as such due to the section of disturbed land, a house left in

[240] (Bowring, 2017) p.73
[241] (Bowring, 2017) p.74

a state of disarray from the effects of the earthquake, (Figure 5.11), and a simulator in a pseudo house that gives the jolt of the force of the magnitude and for exactly the same length of time – 40 seconds (Figure 5.12).

This case study site provides examples of a **retained** memorial as in the slice of damaged land, and the house, and a **remodelled** memorial as the simulator. The land is inside the museum, requiring that the museum be built around the land as it sits in its original location. Not only is it an outside piece of ground inside, but it is preserved to an extent that the soil is coated in a film which makes it appear surreal. The simulator perhaps expresses less melancholy and although it appears as strange there is a Disneyesque mode and dark tourism aspect in wanting to experience the force of an earthquake in a pseudo home setting. The jolt of the earthquake however soon dispels any thoughts of fun and frivolity.

Figure 5.9. The housed section of ground inside the museum at Awaji Island National Natural Earthquake Memorial. Photo by Louise Bailey 2019.

Figure 5.10. A closer section of the disturbed ground and trees that continue from outside to inside. Photo by Louise Bailey 2019.

Figure 5.11. Inside the real house as it was captured in the earthquake. Photo by Louise Bailey 2019.

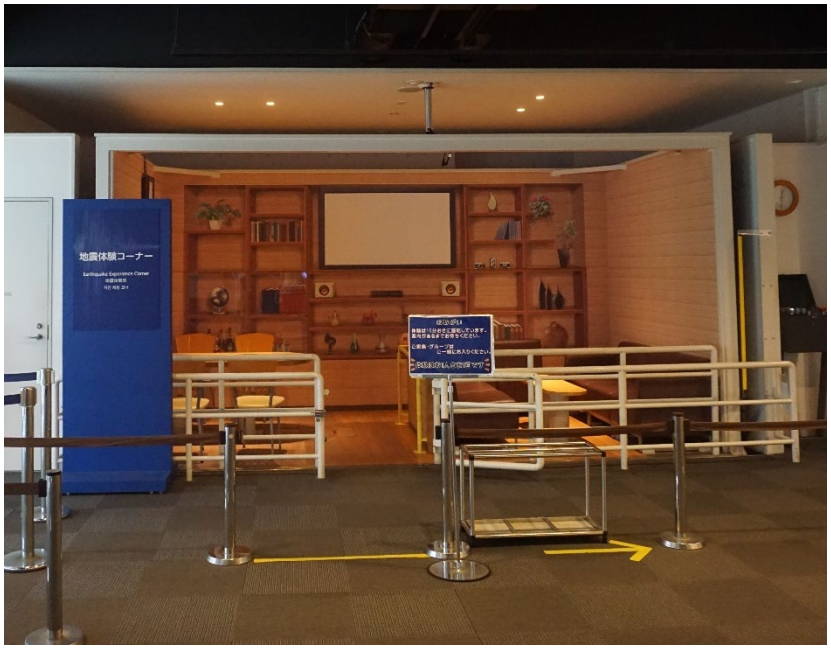


Figure 5.12. The simulator and replica room in a typical house. Photo by Louise Bailey 2019.

5.2 Spatial arrangement

The many memorials to natural disasters in Japan take on a multiplicity of forms and their spatial arrangement is varied. Some fall distinctly into the category of object or field, and others show sharp boundaries between inside and outside. Whether the memorial is distinct and can clearly be defined in a spatial arrangement or obscure and with blurred edges blending more into an extended landscape, they require critique on multiple layers. Analysis of the memorials surveyed in this thesis reveals that characteristics varied from memorial to memorial.

5.2.1 Object / field

To return briefly to the total list of the seventeen 'memorials' in Japan, twelve could be classified as 'object' and the remaining five, 'field'. The reduced number of sites selected for analysis are more

evenly distributed in their classification as object and field as shown by the darkened boxes in Table 3, page 102. To re-visit briefly the criteria for object-type, sculptures and memorials tend to be single elements sitting in the landscape, not inviting engagement or immersion. Fields are more like distributed forms, which could be made up of many repeated elements for example the Memorial to the Murdered Jew of Europe, or a large landscape space.

The award-winning fan-shaped memorial on a hillside above the remote Saragai village, 36km drive north of Ishinomaki, is categorised as 'object' and could be classed as a sculpture object (refer to Figure 4.25). The spatial arrangement of 'field' is illustrated in Oi Manawa in Christchurch.

5.2.2 Object

Until the 1960s the 'object' tended to be a single, solid element sitting in the landscape, not inviting engagement or immersion. Certain characteristics helped to define it as 'object', such as the "conventions of representation and figuration."[242] Ishi-no-kinendo was designed by the architect Noritaka Ishikawa of Koishikawa Architects Co. Ltd., while working as a project researcher at the University of Tokyo, and it became a collaborative project with the Kawazoe Lab., and the University of Tokyo. Named the Ishinomaki Memorial, it is dedicated to the city of Ishinomaki and outlying villages that comprise a population of 150,000. The memorial was a winner in the Japanese based 2015 Good Design Awards that states the following as their guiding principles for entries:

"HUMANITY Emerging creative power for products and conceptual embodiments

HONESTY Insight toward contemporary society

INNOVATION Conceptual power to pioneer the future

AESTHETICS Imaginative power for a prosperous lifestyle culture

ETHICS Thinking power to shape society and the environment"[243]

The setting presents the memorial in a remote place in isolation from the public of the region and tourists and is not known by staff at the Ishinomaki Community and Info Center [*sic*] nor by locals in nearby villages. With relatively defined boundaries, a characteristic of 'object' memorials it is sited on a terrace accessed by a single timber and bark path cut into the slope. As an essentially abstract sculptural object it does, however, extends views over the valley below and to the distant hills and

[242] (Stevens, 2009) p.159
[243] (Good Design Award, 2015)

therefore is afforded a less defined boundary. Stevens would question, whether this memorial in its abstract form with an "absence of expressive symbolism", and not available for the public to "commemorate an important, highly emotional event,"[244] offers a place of contemplation for this whole region as its name suggests. Would it be more appropriate if it was a community-led initiative providing a place for the surrounding villagers to mourn the loss of lives in the local area and a place to come together in commemoration of the tragic event?

The object although placed in a landscape is not bound to that landscape; it sits on a base in isolation on top of the landscape. The Monument against Fascism in Hamburg built in 1986, designed by Jochen Gerz and Esther Shalev-Gerz is a 12-metre-high column that was lowered into the ground over a period of time, and then disappear other than a metal plaque in the ground capping the column. Unlike Ishi-no-kinendo, it was known by many who wrote inscriptions on the lead coating before it descended below ground and although it disappeared it left a memory and a legend that would be passed on, and is still written about and visited. Could this memorial in the village of Saragai serve such a purpose? Perhaps it will become a symbol for future generations reminding them of the danger of natural disaster, but this would require a knowledge that the memorial exists and is acknowledged by the people.

The process of establishing this memorial was delegated to architects at Tokyo University. Perhaps if the local people engaged in a consultative process the memorial located in a more prominent or convenient place, would be available to the villagers of Saragai and further afield, and integrated into their daily lives. As Young observes "… the monument succeeds only insofar as it allows itself full expression of the debates, arguments, and tensions generated in the noisy give and take among competing constituencies driving its very creation."[245] This 'object' is placed on the landscape in the context of a small rural village, and may offer a place of rembrance for the local community but offers a different relationship with its surroundings than the 'field' example of Oi Manawa.

5.2.3 Field

A contrast to the 'object' is the 'field' as in Oi Manawa Canterbury National Earthquake Memorial (Figure 5.13). The 'field' cannot be removed and placed elsewhere; it does not stand alone; it is in the landscape connected to and part of the landscape. The curvature of the terrace and wall follow the natural curve in the river, and the steep drop from the road above had previously been an inaccessable sheer bank making the insertion of the memorial seamless, and although some would

[244] (Stevens, 2009) p.159
[245] (James E Young, 2016) Loc.383

argue that disruption to the overall natural qualities of the site are more than minimal it must be remembered that it lies within an urban context of the central city where nature is valued, but very often compromised by urbanisation. Vegetation envelops each end of the built structure and a row of trees continue the linkage of nature along the water's edge. Options of approach are made via wide steps at the western end by the bridge, or a gradually sloping ramp from the eastern approach which links to the city centre. Lightness of tone in the pale grey marble stone is welcoming, not foreboding and opportunities to visit for commemoration, procession, history and recreation are multiple. The height of the wall at 3 metres is approximately twice the height of a human but is offset by the wide open adjacent space of terrace, small scale steps to the water's edge, the river and opposite park space. The length of the memorial almost equals the length of the park space on the northern river bank and the western end is truncated by the Montreal Street Bridge. Dense vegetation provides a soft boundary to the east enclosing both the memorial structure and the open park space in a contained and unified space, and could be thought of as a "public room"[246] where the memorial wall and large trees enclose and define the space (Figure 5.13). Facing north, the winter sun is captured on the memorial bringing both warmth and light, and the heat of summer is cooled by the row of deciduous trees. Bringing the visitor below the road and closer to nature deadens city noise allowing different sounds to emerge, of ducks, wind in the trees and swirling water.

Elements of the whole memorial site cannot be considered separately and are viewed as a complete landscape; the wall and terrace, the stairway and ramp, the river and the north bank of grass, seating and mature trees. Forming a section of a river promenade the memorial is integrated into the city fabric, linking the historic Antigua Boatshed, Christchurch Hospital, the Botanic Gardens to the west, to the central city and riverside hospitality area to the east. The spatial qualities of this field integrate it into the everyday lives of many who sit on the seats or steps, eat lunch, make phone calls, feed the ducks, play, walk through, mourn or remember the earthquake that rocked the city, (Figure 5.14, Figure 5.15, Figure 5.16, Figure 5.17).

[246] (Lauzon, 2019) p.3

Figure 5.13. North bank to the right and south bank to the left complete the whole memorial site at Oi Manawa. Chairs on the north bank are set-out for attendees at the annual memorial service. Photo by Louise Bailey, 2020

There is a social binding in a place that was designed for remembrance and also for people to enjoy in living. These same attributes can be found in the 9/11 Memorial, the Memorial to the Murdered Jews of Europe and the Vietnam Veterans Memorial, where the 'field' absorbs the visitor, placing them within a space whereas it is not possible to be within the 'object' memorial such as the Ishi-no-kinendo and the Miracle Pine. This absorbtion into the 'field' memorial where the spatial impact is powerful, and the location cohesive, Young would argue, "maximises the opportunity for symbolic meaning."[247] This memorial does not coerce the visitor into a forced remembering but lays open the opportunity.

In the "expanded field" the opportunities for private remembrance are available, where someone may show grief in a less publicly space. Oi Manawa offers places to retreat on the north bank and remain distant from others, and the terrace seating on the south bank allows visitors to either face the wall or the river. Sitting on the steps facing the river where the visitor is lower than passers-by is removed from the public gaze. Some may wish to touch the name of a loved one on the wall and stand close to where that person is acknowledged. The longitudinal spatial arrangement of the wall and steps distributes visitors avoiding a cluster effect, and therefore provides private space.

In scale, the examples discussed of 'object' and 'field are not the same although not vastly different, but it is their spatial qualities that set them apart from each other. This form of analysis acts as a tool

[247] (James E Young, 1993) p.8

to categorise all the memorials on the typological categories Table 3, 102. To understand further anlaysis of the sites the next section relates figurative and abstract memorials.

Figure 5.14. The north bank park space provides opportunities for play. Photo by Louise Bailey, 2020

Figure 5.15. The south bank memorial wall provides opportunities to relax and for contemplation. Photo by Louise Bailey, 2020

Figure 5.16. A commemorative procession walking past the names of the victims. Photo by Louise Bailey, 2020

Figure 5.17. Children playing on the steps of Oi Manawa following a remembrance anniversary. Photo by Louise Bailey, 2020

5.2.4 Figurative / abstract

Most of the memorial sites visited in Japan fit within the more contemporary approach to memorial design of the abstract. Oi Manawa is also an abstract memorial, and of any of the memorials in both countries the Miracle Pine is more closely aligned to the figurative. The tree stands alone seemingly on a plinth and is separated from its surroundings by a low protective railing which portrays a message that says, 'this place is sacred, do not touch or come any closer'. Like the figurative hero that symbolises power, glory and unification of a nation, the tree symbolises hope and resilience of the people and nation and could be understood more from a political motive although the community desire to protect the tree was driven by the desire of hope for an improved future. The tree received wide media attention and was promoted in a campaign to encourage tourism.

5.2.5 Inside/outside, distinct/obscure

Memorials are often placed in a landscape context, and the memorials in Japan, and Christchurch are no exception. At times the boundary of the built structure of the memorial, and the surrounding landscape is not clearly defined. One might ask, what is memorial, what is landscape, what parts belong to the other and do they share common elements? Is the landscape outside and is the built form strictly walls enclosing an inside? "Inside establishes physical security and safety from nature's elements and society's demands,"[248] and in so doing those inside adhere to a sense of identity in association with the building. A building generally defines the inside and outside as separate entities, but the boundaries at the point where they meet, or transition can be blurred. Figure 5.18 illustrates the relationship between inside and outside. The place where these differences converge is a threshold, a zone rich in a mix or blend of properties that "entails the preservation of differences, as well as the creation of something new from their coexistence."[249] "Thresholds are where transformations begin, where exchanges between unlikely things occur, and where identities are declared."[250]

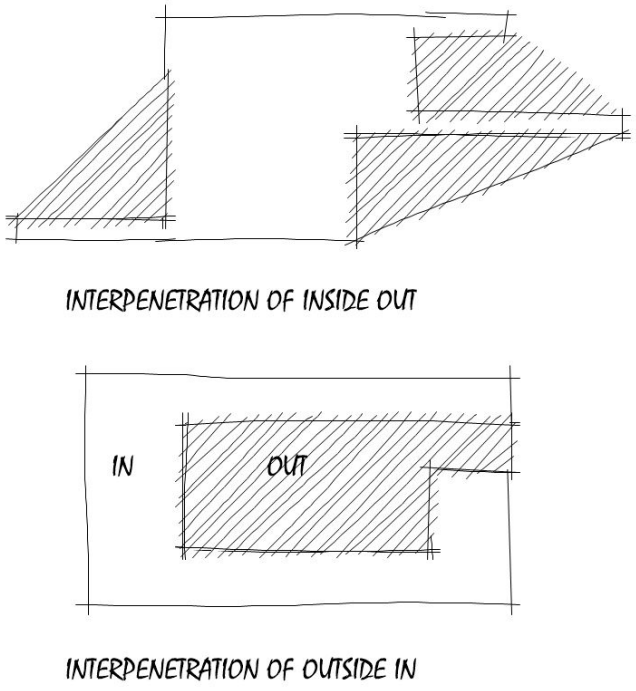


Figure 5.18. Diagram illustrating the relationship of inside and outside. Adapted from Assefa's research, Inside and Outside in Wright's Fallingwater and Aalto's Villa Mairea. Drawn by Louise Bailey, 2020.

[248] (Assefa, 2003) p.12
[249] (Berrizbeitia, 1999) p.82
[250] (Berrizbeitia, 1999) p.82

A vivid example of the category of inside / outside is Cosmic Elements in Kobe. It appears as an abstract component within Higyashi Yuenchi Park with pathways that lead into other areas in the park and connect to the street on two sides, thus making it an easy pleasant walk separated from traffic noise and shaded by trees in the heat of summer.

Kusuda plays with a form that is neither sitting on the ground nor in the ground but both, and somewhere in-between, with many points that meet and converge. Figure 5.19 illustrates the interpenetration of spaces. Cosmic Elements has no distinct boundaries, and although there is an outside and inside, this distinction is soft or obscure. It blends into the surrounding striated landform of brick and grass terraces which appear to mimic tectonic plates and the landform of disruption when the plates collide and rupture the surface. The water feature is capped by a solid black granite stone that appears to float over the structure despite its heavy, solid form, and the sound of falling water is heard as a film cascades into the pool on all four sides, although with a shorter fall on three sides where the landform closes in around the structure. The lightness of the waterfall dissolves the supporting structure merging inside with outside.[251] Multiple levels are illustrated in Figure 5.21.

To enter the chamber of Cosmic Elements, the visitor descends into the earth via steps at one end and a sloped circular path that gradually descends into the chamber. Neither entrance is hierarchical indicating any correct entry point and the visitor is left to choose. The scale of the entrances is human and could only allow two people side by side on the sloped path, (Figure 5.20), and singular person on the steps. In times of high visitor numbers queuing would be best achieved from the sloped path as it is open to the elements for a short distance before the descent, and visitors would move in processional route following the curved walls producing an elegiac tonality. All internal walls are concrete, and the close spatial organisation and scale resembles a tomb. A quiet, calm permeates the chamber and the dimensions of the space are intimate. Internally the layout suggests a slow movement past the panels of names on the wall, perhaps stopping for a prayer in front of the name of a loved one (Figure 5.22). The glass ceiling water feature illuminates the chamber and the swirling water adds a peaceful movement to an otherwise inert space. Flowers and origami crane leis can be placed in provided places on the internal walls of the chamber. The crane lei known as Senbazuru is a symbol, in Japanese culture, of hope and healing through challenging times and is often given at weddings to wish the couple 1000 years of happiness.

[251] (Assefa, 2003) p.13

The terraces allow a relaxed and informal place where people can sit, observe or read a book and meet friends. It is a place that blends into the surroundings, although it is within a space of its own surrounded by trees that flow into the park, streetscape and adjacent properties.

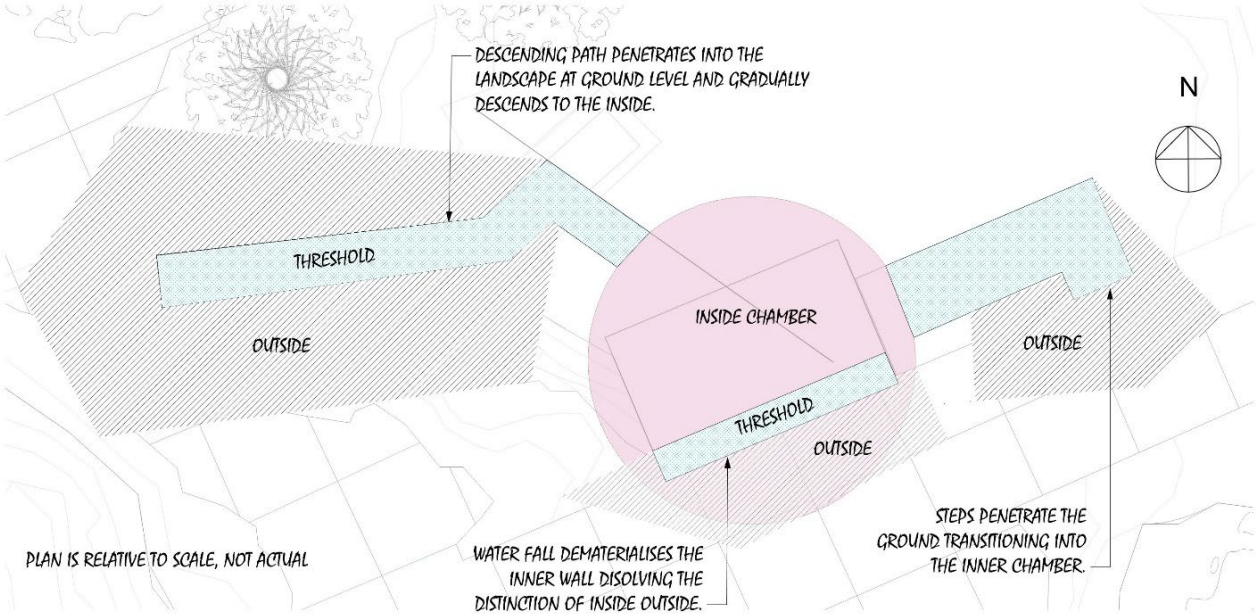


Figure 5.19. Diagrammatic plan of Cosmic Elements illustrating the interpenetration of inside outside. Drawn by Louise Bailey, 2020

Figure 5.20. Cosmic Elements sloped path into the chamber. Photo by Louise Bailey, 2019

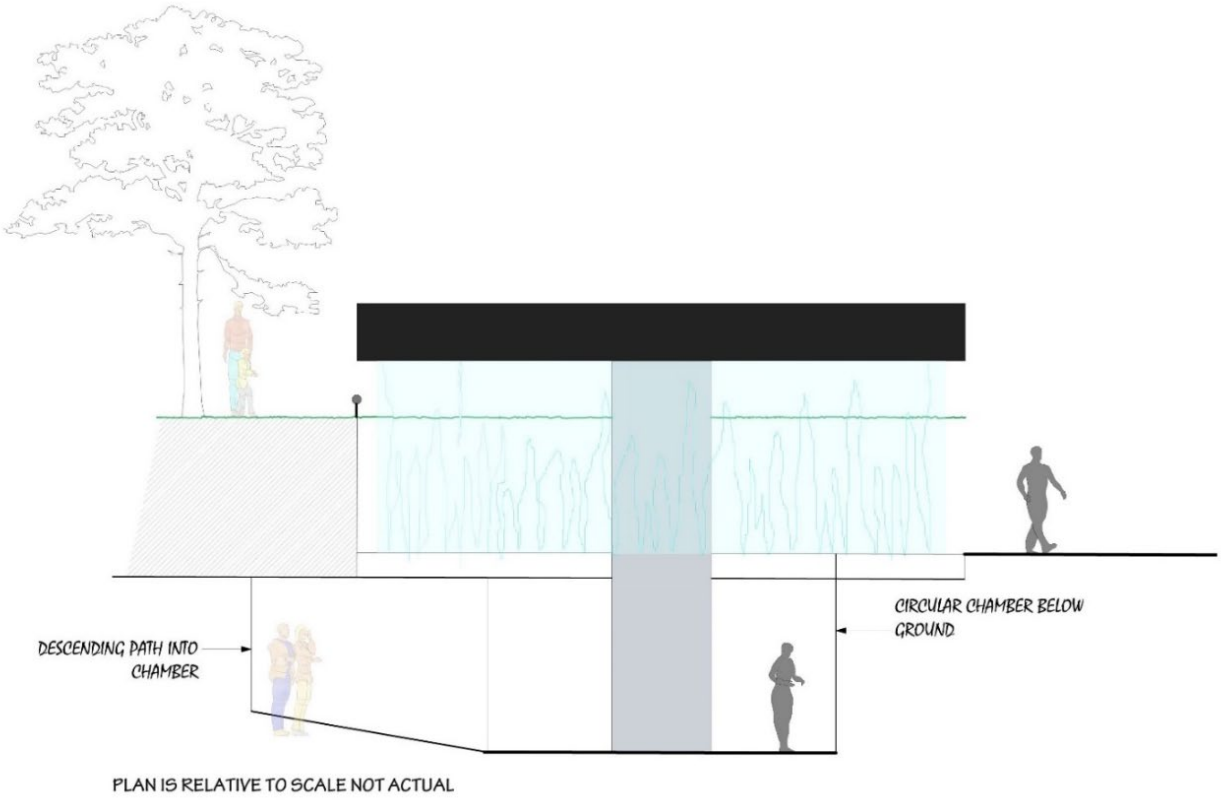


Figure 5.21. Section elevation of Cosmic Elements illustrating the multiple levels and complexity of inside outside. Drawn by Louise Bailey, 2020

Figure 5.22. Victims remembered inside the chamber of Cosmic Elements, 17 January 2020. Crane lei hang on the walls. Photo by Kyodo, The Mainichi

5.2.6 Context

Having examined the physical elements of object/field, abstract/figurative, and inside/outside leads to the final discussion of spatial qualities, **context**. "History has shown that the appreciation of any particular form or colour or space varies with location, people, and time, and that what might be held as beautiful by one group of people in one era can appear as ugly or repugnant to another in a different time."[252] In discussing the aesthetics of sustainable landscapes Treib asserts that the 'beauty' of a landscape is perceived. "The viewer must read and understand in some way that a landscape departing from an established norm must demonstrate the intention behind the new look."[253] This infers that with an understanding of the benefits to the environment and an ecosystem of a sustainable landscape what might appear in a formal landscape as untamed and therefore ugly, may then be interpreted as beautiful. It follows then that what may be perceived in one culture as beautiful may be perceived differently in another.

In his understanding of the differences between the western culture and the eastern culture of Japan Basil Hall Chamberlain, eminent British scholar, wrote:

> West have, broadly speaking, a common past, a common fund of ideas, from which everything that they have and everything that they are springs naturally as part of a correlated whole, -one Roman Empire in the background, one Christian religion at the centre, one gradual emancipation, first from feudalism and next from absolutism, worked out now or in the process of being worked out together, one art, one music, one kind of idiom, even though the words expressing it vary from land to land. Japan stands beyond this pale, because her past has been lived through under conditions altogether different. China is her Greece and Rome. Her language is not Aryan, as even Russia's is.[254]

Chamberlain wrote this in 1890, and Japan experienced considerable westernisation since the Second World War, but culture does not transform completely in 130 years, therefore much of the traditions and cultural ideology then will be relevant now. The Japanese language remains dominant and little English is spoken. A cultural difference in the appreciation of flowers is noted by Chamberlain. The cherry blossom marks a festival season when many Japanese and tourists visit areas of Japan to witness the stupendous display of blossom. Chamberlain makes the point that in contrast the Camellia is highly prised in western culture whereas in Japan it is considered unlucky,

[252] (Treib, 2018) p.33
[253] (Treib, 2018) p.34
[254] (Chamberlain, 1905) p.134

"because its red blossoms fall off whole in a way which reminds people – at least it reminds Japanese people – of decapitated heads."[255]

The Japanese spiritual connection with elements like water is important in Buddhist beliefs and practices. Water is often found at the entrance to a shrine for ritual washing and cleansing. Waterfalls are believed to be sacred and standing under one is thought to purify the individual and in both Japanese and Chinese art water is inseparable from mountains.[256] Traditionally the Japanese garden emulates the natural landscape of mountains, valleys, waterfalls and streams and it may be a fair assumption that the name Cosmic Elements refers to the Buddhist system of the five universal material elements wood, fire, earth, water and void (or space), the sixth mental element is consciousness called Dainichi.[257] The cosmos, called hokkai, could be taken from Japanese Buddhism expressed by Kūkai a philosopher who brought a form of Buddhism to Japan from China in the Heian period (794-1185CE), in which the organic whole embraces a path to enlightenment and liberation from pain. It involves an interweaving of all things in life of,

> thing-events that come and go via interdependent origination. This great cosmic body of the hosshin embraces all phenomena through the mutual "non-obstruction" of the six universal elements (rokudai muge). The interdependence of the elements and non-duality signifies enlightenment and an embodiment of the Dharma. That is, as one's mental states express the *samadhi* of Dainichi, so also one's body along with the bodies of all living and non-living things, in every bodily movement, manifests Dainichi's body and its movements. Dainichi is preaching the Dharma through all phenomena of the cosmos.[258]

Without a literal translation of the elements in philosophy to the elements in Cosmic Elements it is not difficult to correlate the symbolism in the visual form. Without this cultural understanding the memorial presents with qualities that suggest commemoration, but the symbolism would be lost. Japanese people, familiar with Buddhism and its language of symbols would need to think less about the elements and their representation.

While the aesthetics of memorials is not a consideration in this thesis the context whether spatial, historical or cultural has a bearing on the aesthetic of the design. In their physical context memorials visited in Japan and Christchurch varied in their contextural relationship with their surroundings. Cosmic Elements is sited within Higashi Yuenchi Park in a business district between Sannomiya

---

[255] (Chamberlain, 1905) p.174
[256] (Nose, 2002) p.11
[257] (Nose, 2002) p.11
[258] (Krummel, 2018) ch.3.5

Station and shopping district and the Port of Kobe and Meriken Park, (see map Figure 4.2). The urban context affords the memorial an opportunity to engage with the people of Kobe on an everyday basis as they go about their normal lives and its location within a well-used public park makes it a perfect place for commemoration events. There are no barriers to the park and the Cosmic Elements memorial, so access is open to the public and gained from all sides. Commemorative events are discussed in Chapter 5.3 Messages, page 128.

Figure 5.23. A visitor to the memorial takes respite from the heat. Photo by Louise Bailey, 2019

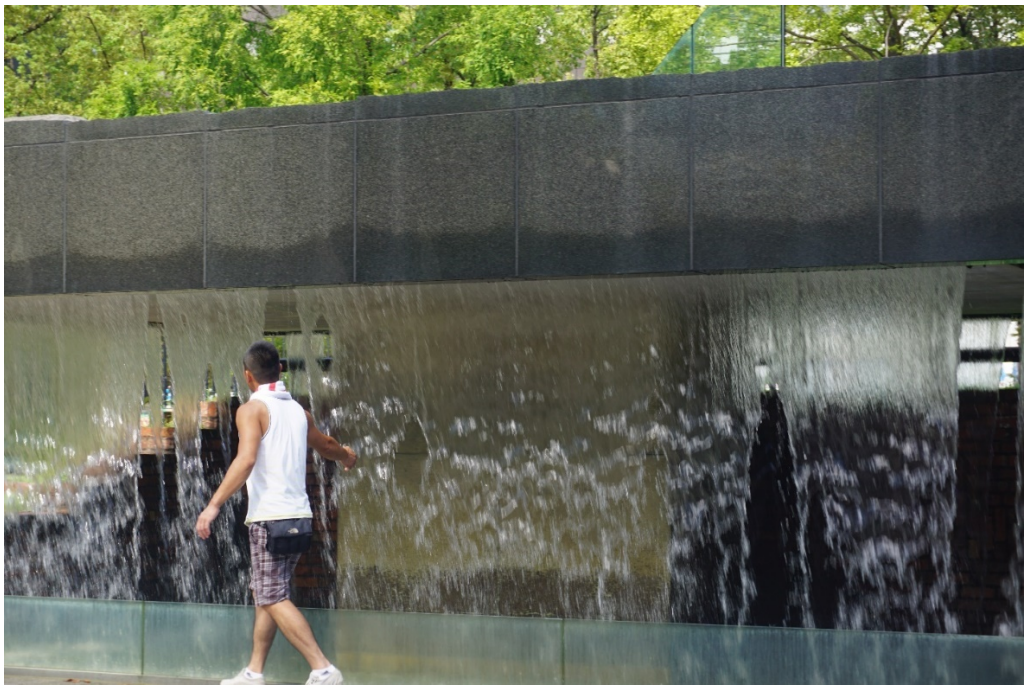


Figure 5.24. A visitor runs his hand through the sheet of water. Photo by Louise Bailey, 2019

The site's external topography engages the visitor with invitations to sit on the terraces and slopes and explore in ways that do not appear to be related specifically to commemoration (Figure 5.23). The textures entice people to touch and provide a diverse sensory experience. Some run their hands though the waterfall as seen in Figure 5.24, take advantage of the shade, listen to the sounds of falling water and the rustle of the breeze in the trees as they offer relief from the densely populated city (Figure 5.25). The intersecting paths bring people in from different directions and yet within the arrangement of blocks of terraces are spaces to retreat and watch passers-by. In the range of experiences offered by the memorial it could be compared to the Memorial to the Murdered Jews of Europe. In his observation of visitors to the Berlin memorial Stevens noted, "The design of many traditional representational memorials suggests that visitors should remain stationary and physically passive in front of them, to "read" their carefully composed iconography for a protracted length of time." [259] Cosmic Elements provides little to read and it is the space to be enjoyed with its multiple facets that captures the experience.

Figure 5.25. A visitor passing through the park and memorial. Photo by Louise Bailey, 2019

Oi Manawa, Canterbury Earthquake National Memorial, New Zealand, holds a context within the central city on the Avon River which ensures a place that belongs to it alone: sited in the central city in an urban natural environment, following a curve in the river. The Avon River- Ōtākaro that flows through the central city to the sea is layered with cultural significance. Maori would seasonally come

[259] (Stevens, 2012) p.42

to the river for fish[260] and later European settlement was established around the river. The curve of the memorial follows the curve of the river and the body of water that flows towards the active part of the central city. It is essentially a platform and a wall not unlike the Vietnam Veterans Memorial, but with steps that connect to the river and a ramp at one end and steps at the other emerging back up to the bustle of the city. The depression acts as chamber, removing the visitor from the street activity above and siting it in closer relationship with the water and the open grassed and treed bank opposite. The 'chamber' immerses the visitor in the space compelling them to engage with the textural surfaces and sounds of nature. The hard materials of the wall and steps on the south side of the river are complemented by the green open space on the north bank and together they complete a whole memorial space without boundaries. At times of commemoration a procession is formed from the gathering place on the north bank and crosses the Montreal St bridge along the length of the wall at street level and descends via the ramp.

Oi Manawa is a place for the living, enlivening a site that was previously undervalued. There is minimal explanatory information freeing the memorial to perform to visitors who are without prior knowledge that it is a memorial, and they may not receive that information until closer examination. Both sides of the memorial space provide places for people to sit, ride a scooter or bicycle, eat lunch, picnic, fish and catch up on mobile phone conversations in a break from their workplace. During site observation that was conducted each week over a period of 4 weeks some visited regularly.

5.3 Messages

The range of messages in the memorials in Japan was extensive and related to the type of memorial from those that performed as a marker/ remnant, for sanctification or commemoration, to educate for preparedness of future events, to warn of potential dangers to protect against the ravages of nature, and to maintain a not forgetting of what had occurred.

Table 4 shows each memorial case study, and their significant message. Some memorials would attribute several messages, but it is the more outstanding message that is highlighted for discussion in each case.

As the study progressed the message to be conveyed from a memorial became a critical component of the findings. It became more apparent that some form of education was available at almost all of the memorials in Japan. All sites exhibited a message of 'not forgetting' but with some the emphasis on 'not forgetting' is stronger where the main purpose of the memorial is for the visitors to not

[260] (Christchurch City Libraries, 2020)

forget. A lesser emphasis on 'not forgetting' is found in the remainder of purpose-made memorials as shown in Figure 5.26.

Table 4. highlights the message of each memorial.

	MESSAGES	
NOT FORGETTING	**SANCTIFICATION**	Cosmic Elements Ishi-no-kinendo Okawa Elementary School Oi Manawa Canterbury Earthquake National Memorial
	EDUCATION	Hokudan Earthquake Memorial Park The Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution Sendai, Arahama Elementary School
	TOURISM	Quake City Christchurch Miracle pine Port of Kobe Memorial
	PROTECTION	Ishinomaki and Rikuzentakata Sea Walls Sendai Safe Stations State Highway 1
	MARKER/REVELATIONS	Ancient Stone Markers

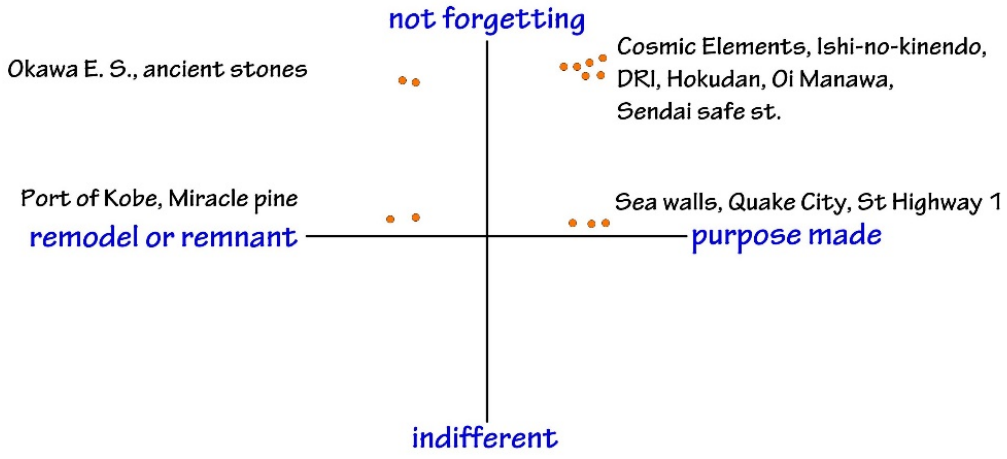


Figure 5.26. Diagram illustrating site cases and their emphasis on not forgetting. Diagram drawn by Louise Bailey 2020.

5.3.1 Warning, marker, revealations

Japan with a geographical position pre-disposed to earthquake and tsunami and a long history of disaster passes-on that knowledge through myth and storytelling. The mythological character "Namazu", the Earthshaker, a giant catfish was thought to be the cause of earthquakes, wiggling his tail to cause disaster. When an earthquake struck Edo (Tokyo) in 1855 it was imagined that Namazu was sending a message that greed was not acceptable and wealth should be distributed more evenly.[261] In the fifteenth century many such creatures including gods, giants, an ox, dragons and snakes were considered the cause of shaking earth as they moved around. At around this same period people who had experienced and survived the ravages of these earthly disturbances had the foresight to warn future generations of the danger of building in areas prone to disaster. Ancient stone markers, discussed in Chapter 1 and Chapter 4, were erected along the east coastline and served as a visible warning of tsunami passing on wisdom from past catastrophic events.

In Miyagi Prefecture, following the 1933 tsunami, building was restricted to safe zones that were known to be at risk of tsunami flooding. At some stage this control was lifted and building in vulnerable areas commenced. A reliance on protection was placed on modern technology and high sea walls were accepted as adequate defence. In the 2011 tsunami the height of the advancing wall of water was much greater than expected, breaching the sea walls, and all these buildings were swept away.[262]

[261] (Bressan, 2012)
[262] (Horizons, 2011) p.21

Most of these object markers were placed on hillsides and over time became lost in the progress of development. As the surrounding environment changed over time, their significance became less important to the local communities. How can these messages be better conveyed to future generations? Kelley proposes that, "Places are held in sites by personal and common values, and by the maintenance of those values over time, as memory."[263] It would follow that these stones lacked a place and were sited in "homeless space." The stone in Aneyoshi, (refer to Figure 1.5,) being close to a small village was visible on the roadside and known to the locals. The village supported a fishing community and the stone would be passed on the way down the hill to the fishing bay, making its presence known daily. This village was one of the few that acknowledged the stone, heeded the warnings and built on higher ground. All lives were saved in the 2011 tsunami and the village of eleven households remained intact.[264]

The next section questions whether all memorials include a commemorative aspect. Natural disasters tend to loop around from the occurrence of the disaster to the establishment of a memorial which provides a place for remembrance until the next disaster occurs and the cycle repeats – disaster- memorial-remembrance-disaster.

5.3.2 Sanctification and commemoration

Three study sites place an emphasis on commemoration and sanctification: Cosmic Elements, Okawa Elementary School and Oi Manawa Canterbury Earthquake National Memorial. To recapitulate, Foote list five signs that make these places distinctive in the landscape termed "fields of care" where sanctified sites: "are often clearly bounded from the surrounding environment …, are usually carefully maintained for long periods of time …, [and] sanctification typically involves a change of ownership, often a transfer from private to public stewardship, … frequently attract continued ritual commemoration, … often attract additional and sometimes even unrelated monuments and memorials through a process of accretion."[265] The detail of these sites is discussed in previous chapters, and in the context of commemoration they are distinctive from other examples in their use for anniversary events and are "widely venerated."[266] Other memorials in the study may also include a commemorative purpose but are not necessarily widely venerated for the purpose. Cosmic Elements and the Light of Hope within Higashi Yuenchi Park are essential components of the commemoration on 1.17 remembering the 17 January Kobe earthquake (Figure 5.28).

[263] (Kelley, 1994) p.142
[264] (Fackler, 2011) p.1
[265] (Foote, 2003) p.9
[266] (Foote, 2003) p.8

On the anniversary of the 1995 earthquake people gather to commemorate the tragedy. Hygashi Yuenchi Park is the centre of commemoration in Kobe and although interest in the disaster is declining there are some who are determined to remember the suffering of those who died and the survivors by passing down the memory and knowledge of the disaster to younger generations. [267] The 25th anniversary of the earthquake was commemorated on 17 January 2020 with events held nationally remembering the tragedy with reverence. Hygashi Yuenchi Park and Cosmic Elements acted again as the place of gathering maintaining purpose in a changing society and provides a 'social binding'. Following the writing of Kelley, the 'common values' of current and future generations will be maintained through memorable tradition and ritual that not only mourn the loss in an 'elegiac' way but also provide beauty, hope and an opportunity to ponder one's existence and fragility.

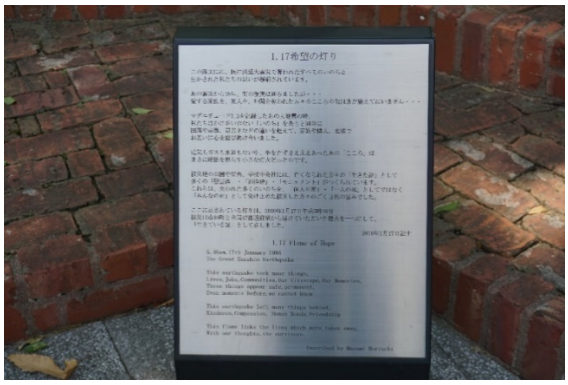


Photo by Louise Bailey, 2019

Figure 5.27. 1. 17 Flame of Hope reads:

5.46am, 17th January 1995

The Great Hanshin Earthquake

This earthquake took many things,

Lives, Jobs, Communities, Our Cityscape, Our Memories,

These things appear safe, permanent,

Even moments before, we cannot know

This earthquake left many things behind,

Kindness, Compassion, Human Bonds, Friendship

This flame links the lives which were taken away,

With our thoughts, the survivors.

[267] (Mainichi, 2020)

Commemorative ceremonies and the additional mood of those events is layered into the atmosphere generated by the setting, time of day, weather and props enriching a connection between commemoration and emotions. The sun was shining and the wind not too cool for the guests sitting comfortably under the trees on the north bank during the 2020 remembrance service at Oi Manawa in Christchurch.

"Keeping their dreams alive," was the theme of the 2018 commemorative service at Oi Manawa. Lianne Dalziel, the Mayor of Christchurch, stated that the theme "helps us look back at all that we've lost with a sense of hope and aspiration for the future. It also helps us to recall all those who came to our rescue and those who offered support at our time of need and what that meant to us."[268] The 2020 memorial service was small and understated. September 2020 and February 2021 will be the 10th anniversaries of the Canterbury earthquakes and it could be expected that the commemorations would be more grand and attended by a greater number of people. The 2020 Civic Memorial Service was held over one hour and included a minute's silence at 12.51pm, the time the earthquake struck. The main service and gathering of people were held on the north bank while entry was prohibited on the south bank memorial with directional movement as shown on the map Figure 5.28. Representatives from the countries of the victims and dignitaries crossed the bridge to the south bank in a procession and laid wreathes at the base of the names on the marble wall. Other attendees were invited to scatter flowers and petals into the river as they crossed the bridge to the memorial wall (Figure 5.29).

A sense of enclosure is created by the memorial wall on the south bank and the tall trees on the north bank with adequate space for people to gather separated from passing traffic and other urban disturbances. The Mayor of Christchurch and other official dignitaries were seated at the front of the seating for guests and many were in official uniform setting a formal tone. The guests were generally attired in casual clothing and could sit back and relax without any pressure of performance duties. Entry to seats was controlled in rows and access points were either open or roped off for "no admittance" again adding a sense of formality and control. A helicopter regularly buzzed overhead adding a sense of danger or threat of attack from a terrorist or extremist. Nonetheless the atmosphere was generally relaxed and light but still reverent and solemn as it was nine years since the tragedy and for many the pain and trauma eased. Although the middle of the day shares no specific atmosphere, such as the ambient light of sunrise or sunset or the mystique of pure darkness, music is effective in evoking emotion. "Nimrod" by Elgar played by a brass band is elegiac, soft and gently builds a crescendo and returns to a gentle conclusion through creating and resolving tension.

[268] (Harris, 2018)

From my own emotions and observing those of others there were few who were not wiping away tears.

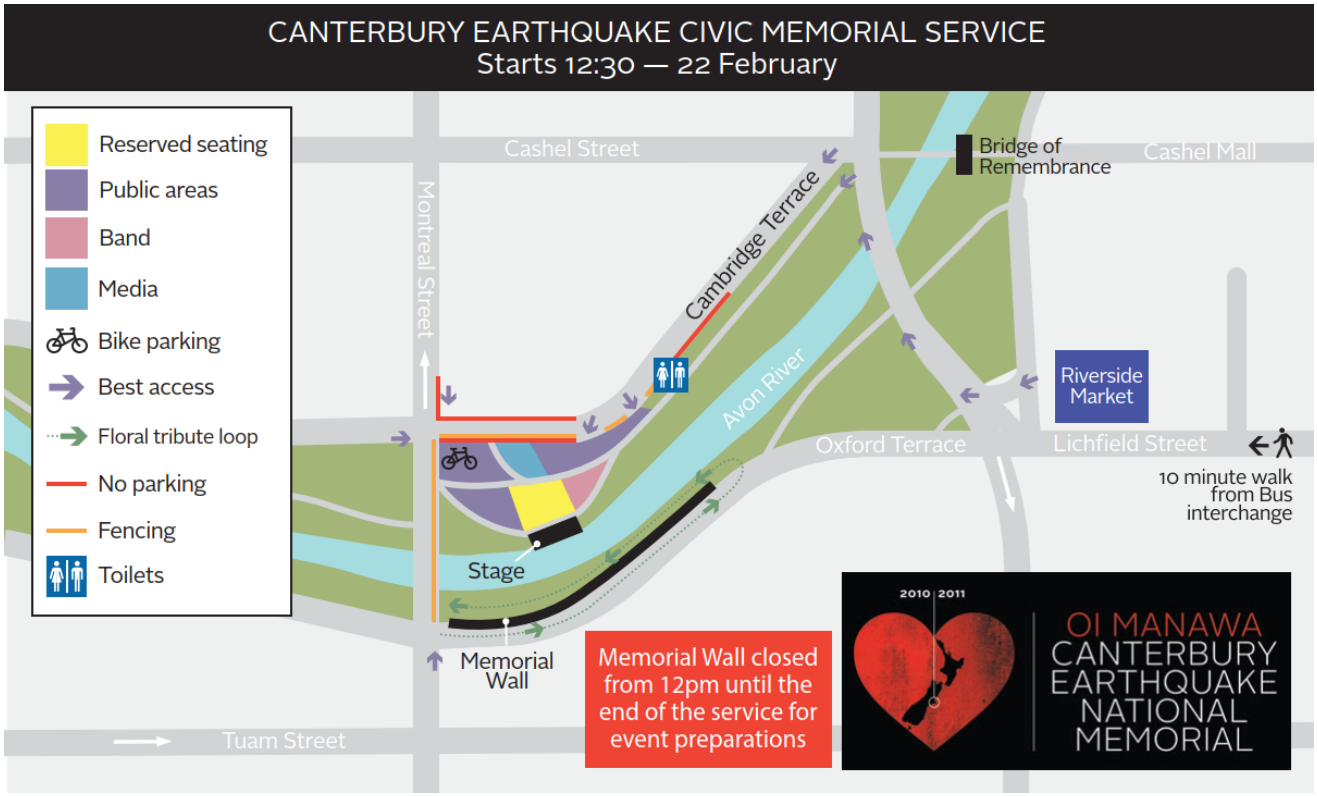


Figure 5.28. Plan of movement for the commemorative service. Image Christchurch City Council, 2020, https://ccc.govt.nz/news-and-events/whats-on/show/3606

Candlelight is employed at many remembrance events in Japan although both the 1995 earthquake and the 2011 earthquake / tsunami did not occur in darkness. At 5:46 a.m. in December, mid-winter in Japan the earthquake struck in Kobe and many rise early for the candlelit vigil in Higashi Yuenchi Park. Bamboo candle holders inscribed with a symbol are lit where people pray in the Buddhist tradition (Figure 5.30). Video footage of the 2020 remembrance gatherings for the 25th anniversary of the 1995 earthquake shows the service at Hokudan Earthquake Memorial Park where candles were lit, and a community choir sang Amazing Grace in English as flowers were laid in front of the sculptural pyramids. Similar events are held in remembrance of the 2011 earthquake / tsunami throughout the Tohuku region including smaller towns, such as Nobiru Station.

Figure 5.29. Attendees at the 2020 memorial service at Oi Manawa scattering flowers and petals into the river. Photo by Louise Bailey, 2020

Figure 5.30. Bamboo candle holders at Higashi Yuenchi Park. Image: "1.17" by toyosakihiroki is licensed under CC BY-NC-SA 2.0

Another sanctified site in Christchurch is the foundation remains of the Canterbury Television building where 115 of the 185 lives were claimed in the 2011 earthquake. Opened eight years after the earthquake the site is a private space, described by the designers as "organic" and non-prescriptive. A private blessing by Maori dignitaries and the Mayor of Ōtautahi was attended by bereaved families and friends.[269] [270] Although not officially sanctified, the value of the spontaneous

[269] (Christchurch City Council, 2018)
[270] (Desk, 2018)

installation of 185 Empty White Chairs in central Christchurch on a vacant piece of land is debated by the community of Christchurch.[271] While the artist called for the installation to be made permanent there are many who are opposed to it.[272]

Okawa Elementary School qualifies as a sanctified site as it is the exact location where children and teachers died, and where bodies may remain. Although the land and buildings were government property and there is no change of ownership the school is decommissioned and now officially classed as a memorial site. This memorial does not fit neatly into Foote's list. It exhibits cues to care but not to the level of a memorial in a public space within a city. Each year people gather at the site to remember those who died and show support for the parents and families of the children and teachers, as shown in Figure 5.31. Remediation work at the school is incomplete eight years later, and a permanent shrine or memorial structure has not replaced the temporary shrines that serve as a place for commemoration as shown in Figure 5.32. The temporary shrines are tended regularly by the remaining local community. Only ten families of the 200 families in the Okawa district did not lose a family member in the tsunami.[273] In March 2020 commemoration events were either cancelled or scaled down without participation from the public due to Covid 19 restrictions.[274]

Figure 5.31. A community mourns the loss of children and teachers at the Okawa Elementary School. Image: "Ishinomaki Okawa Elementary School 2" by ian.munroe is licensed under CC BY-NC 2.0

Figure 5.32. A temporary shrine showing signs of care eight years after the tragedy. Photo by Louise Bailey, 2019

[271] (The Press, 2017)
[272] (Sidedoor Arts Trust)
[273] (Nagano, 2014)
[274] (Jiji, 2020b)

5.3.3 Education

Education is a form of memorialisation and is prevalent in Japan following a multi-faceted approach. Three memorial sites in Japan were selected for discussion around the theme of education: The Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution, Hokudan Earthquake Memorial Park, and Sendai, Arahama Elementary School. Japan learned hard lessons from the catastrophic natural disasters that affected the country. Each time a disaster takes thousands of lives it also affects the economy as the country rebuilds that which is broken and the country takes necessary steps and precautions to limit that damage in future disasters. Preparedness for these events is a visible feature of many of the memorials in Japan, and research centres for natural disaster risk management throughout the country provide a framework for improvement to the vulnerabilities of a society exposed to constant risk. Systems put in place by the Japanese Government to assist when a disaster occurs indicate a heavy reliance on support from the public in the event of a major disaster. This sentiment recently implemented in New Zealand, responds to the threat of a major earthquake on the Alpine Fault expected in the next 25 years. The 2019 White Paper published for the Sendai region, an annual report on Disaster management and preparedness states, "Amid population decline, resulting in the depopulation of towns and villages and declining membership of voluntary disaster management organizations and volunteer fire corps, it is vital to foster communities with a strong disaster management awareness, which means that each community member takes specific disaster mitigation actions with a recognition that it is no one but themselves who can protect their life."[275] A study of the response in the Great Hanshin Earthquake (1995) revealed that 80% of people were rescued through their own efforts or assistance from family and neighbours.[276] National conferences on promoting disaster risk reduction are held annually, and the Prime Minister chairs the National Disaster Management Council, indicating the importance of planning for disasters in Japan. September 1 is Disaster Preparedness Day in Japan and a remembrance-day of the 1923 Great Kanto earthquake that killed more than 100,000.[277] The combining of remembrance and education amplifies the focus on preparedness. Evacuation drills and associated preparedness exercises are performed in Kobe on that day by government employees, the business community and in schools.[278] November 5 is World Tsunami Awareness Day, a significant date in Japanese history of disasters. On this day in 1854 a farmer saved lives by setting fire to his harvest to draw attention to the villagers that a tsunami was approaching.[279] A

[275] (Cabinet Office, 2019) p.61
[276] (Cabinet Office, 2019) p.61
[277] (Suppasri et al., 2015) p.609
[278] (Cabinet Office, 2019) p.70
[279] (United Nations, 2020)

publication relating the story is made available by the United Nations (Figure 5.33). An embankment planted with trees was built after the event providing protection form future tsunami. Tsunami drills are performed on this date in honour of the Inamura no hi story, and in 2018 this involved 900,000 people nationwide who responded to the awareness campaign.[280] Posters promoting the day were displayed publicly throughout the country, (Figure 5.34).

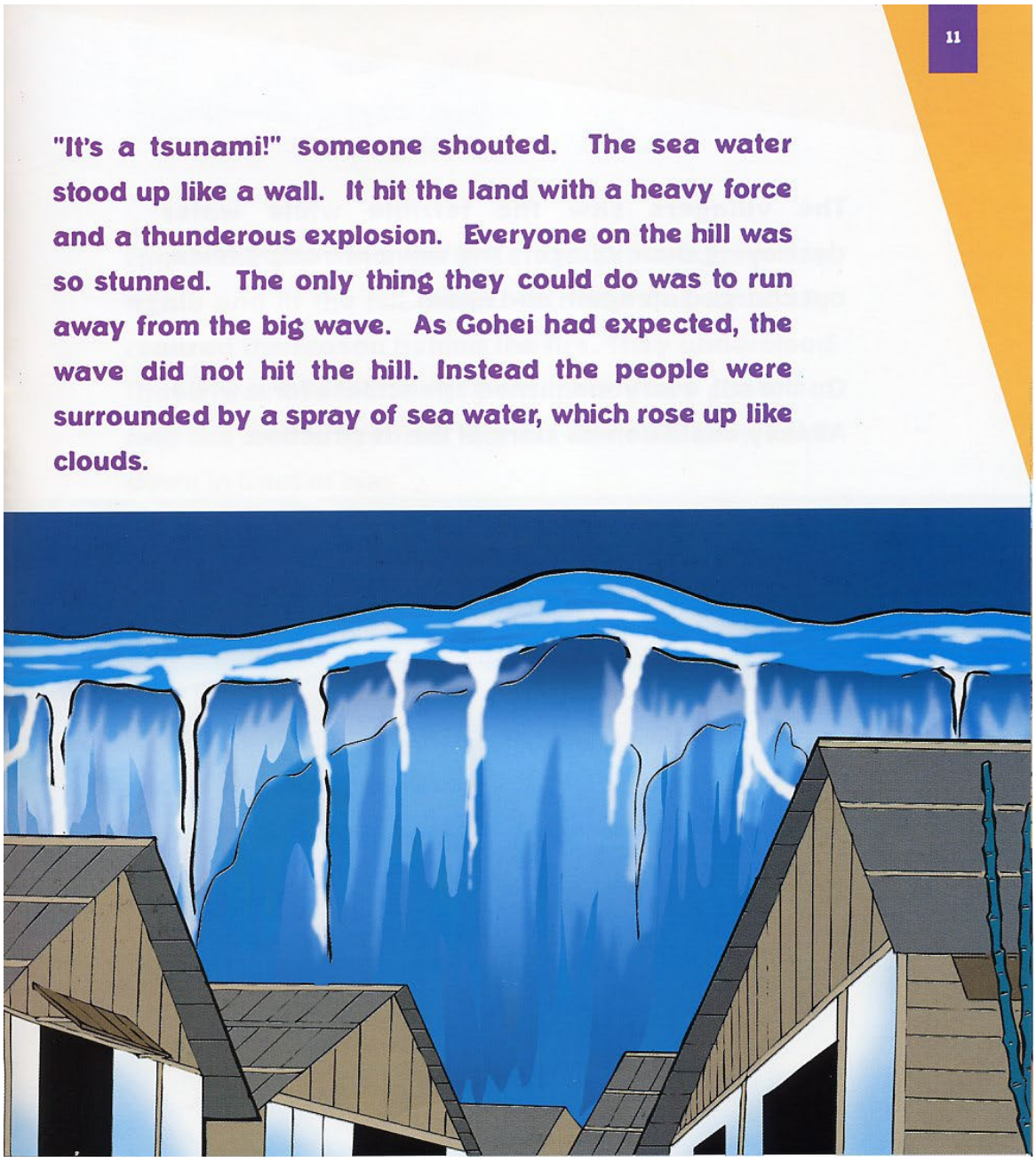


Figure 5.33. Excerpt from a booklet relating the story of Inamura no hi. Image source: Asian Disaster Reduction, Tsunami, lessons learnt from Japanese story: Inamura no hi.

[280] (Cabinet Office, 2019) p.72

Figure 5.34. The 2018 public awareness poster to raise awareness of tsunami. Image White Paper Report Disaster Management 2018. P.73

The Kobe earthquake prompted schools in Japan to integrate learning about natural disasters and preparedness into the curriculum across different subjects and many schools take the students to a learning centre as part of that education.[281] Three important learning outcomes were identified in the programme and are illustrated in the diagram Figure 5.35:

① To utilize the earthquake experiences: students will acquire a sense of respect for life and of compassion and will respect human life

② To impart knowledge on disaster reduction: students will acquire knowledge and skills necessary to protect their lives

③ To share the earthquake experiences: students will understand and share victims' various difficulties caused by the earthquake[282]

[281] (City of Kobe, 2010) p. 301
[282] (City of Kobe, 2010) p.302

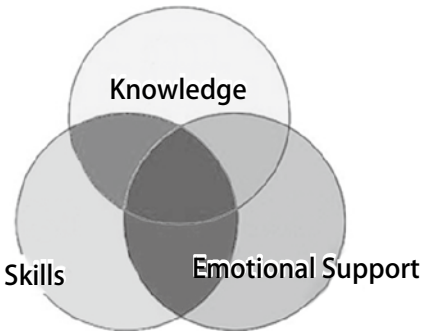


Figure 5.35. A conceptual diagram of the above philosophies. It consists of three fields: knowledge, skills, and heart and mind. Image source, Comprehensive Strategy for Recovery from the Great Hanshin-Awaji Earthquake. March 2010, City of Kobe, p.302

New Zealand launched a website in 2020 titled "Get Ready," which is launched by the National Emergency Management Agency that provides advice on what to do in the event of a natural disaster. The "Get Ready" website was not mentioned at the Civil Defence AF8 information evening held in March 2020 at Lincoln Events Centre, Canterbury.

Figure 5.36. A selection of typical natural disasters in New Zealand. Image source: https://getready.govt.nz/emergency/

The title page on the website of Get Ready states," In New Zealand we have a lot of natural hazards. Earthquakes, floods, landslides, snow, storms, tsunami, volcanic activity, and other hazards can happen any time and often without warning."[283] The graphic image Figure 5.36 shows the a serene landscape of water mountains and volcanoes not dissimilar to Figure 5.34 depicting the background scene of the Japanese landscape. The website offers many resources for use in community groups, and parents and schools for education of natural disasters. A programme called "What's the Plan Stan?" provides information to schools on how they might integrate disaster preparedness into the school curriculum through the topics of health and physical education and social studies. The

[283] (National Emergency Management Agency, 2020)

international ShakeOut earthquake drill to be held at 9:30am, 15 October 2020, shows 1.40 million participants registered including 300,399 in Japan and 255,159 in New Zealand.[284]

The first of the four sites to be discussed in the context of findings on the educative function of memorials, is the Disaster Reduction Institution built in Kobe in 1995 as a memorial to the 1994 earthquake, refer to Chapter 4.2.4 for a description. The institution housed in two adjacent buildings performs a service as a museum by collecting, preserving and exhibiting earthquake-related resources and is open to the public, both local and international, and learning sessions can be scheduled for school and business groups tailored to their focus and objectives. The relevance of admission fees is discussed and compared in Chapter 6 in the section on in the level and type of information provided at memorials. Admission for school students at the Disaster Renovation Institution is free, university students NZ$7.00, adults NZ $9.00. My guide in Kobe, Kohei Takahara a researcher at the institution, with a Doctorate in Multicultural Innovation and expertise in commemoration and community, was able to provide insight at memorial sites where little information or translation was available.

Many tourist places visited in Japan follow a set procedure for entering a house, garden or shrine and while the visitor is not necessarily expected to follow in single file, the entering of a building often includes a formal aspect. This was no different at The Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution. On entering visitors are asked to remove shoes, then file into a theatre with surround screens and stand behind a rail barrier to view a short documentary or show of the earthquake as it happened. Sounds of buildings crashing, sirens boom loudly and fire and lights flash in the darkened room. From observation of families with young children, the parents seemed to be unconcerned that the intensity of the images shown are in some cultural views inappropriate for young children. Following the screening visitors emerge into a floor with rows of panels like computer screens with information to read and associated images, samples of which are shown in Figure 5.37, Figure 5.38, Figure 5.39. Here are messages of not forgetting that are passed through the generations by song, poetry, and storytelling.

Figure 5.39 explains that the Hyogo prefectural Maiko High School “is the only school in Japan offering a course on environmental disaster mitigation,” and other schools may visit as part of a course they may be undertaking to hear the stories. The school expects that future generations will benefit from the storytelling and that “up to now adults made up the majority of ‘storytellers’, [and] the school expects that the stories of the earthquake as told by young people will contribute to,

[284] (ShakeOut.org, 2020)

"disaster prevention for the protection of children," in the future. The lower caption refers to a network of storytellers now retired from municipal duties who travel Japan relating their earthquake experiences. Figure 5.40 shows an older man relating stories to a younger generation. The concern for fellow citizens, neighbours and family has revived since the 2011 earthquake in East Japan, "Japan's traditional values of showing sympathy to others and being conscious about other people's situations re-emerged."[285] Storytelling and the joy of sharing knowledge was evident in many of the museum memorials visited in Japan.

Dioramas of street scenes revealing the damage after the earthquake and fire are displayed along with panels of photographs taken at the time, (Figure 5.41, Figure 5.42, Figure 5.43, Figure 5.44, Figure 5.45, Figure 5.46).

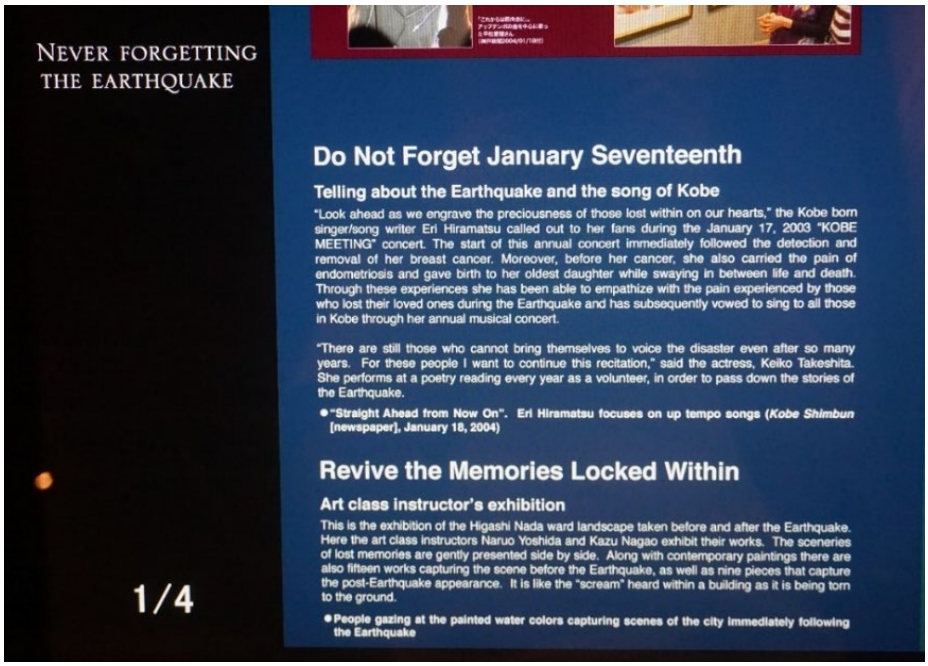


Figure 5.37. Panels in the earthquake display room of the DRI explain the contribution made by artists who annually perform concerts of remembrance. Photo by Louise Bailey, 2019

[285] (Jung, Toriumi, & Mizukoshi, 2013) p.641

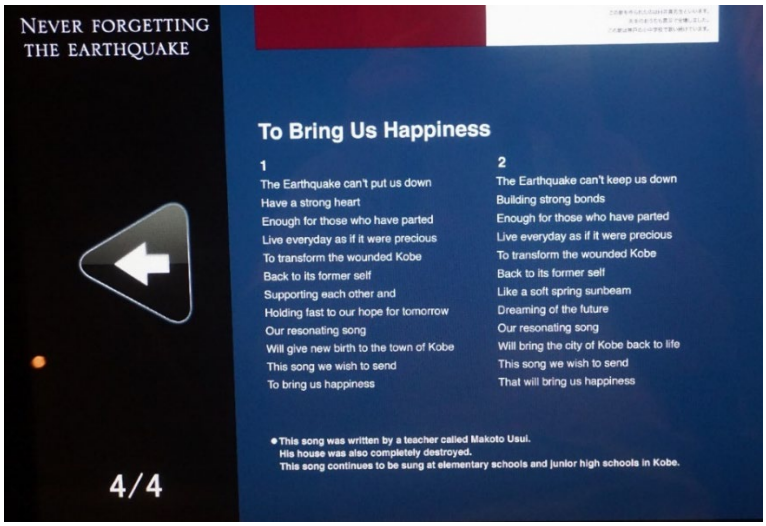


Figure 5.38. Lyrics of a song written by a schoolteacher in Kobe. Photo by Louise Bailey, 2019

A transcript of the second verse reads as follows:

The earthquake can't keep us down

Building strong bonds

Enough for those who have parted

Live everyday as it if were precious

To transform the wounded Kobe

Back to its former self

Like a soft spring sunbeam

Dreaming of the future

Our resonating song

Will bring the city of Kobe back to life

This song we wish to send

That will bring us happiness

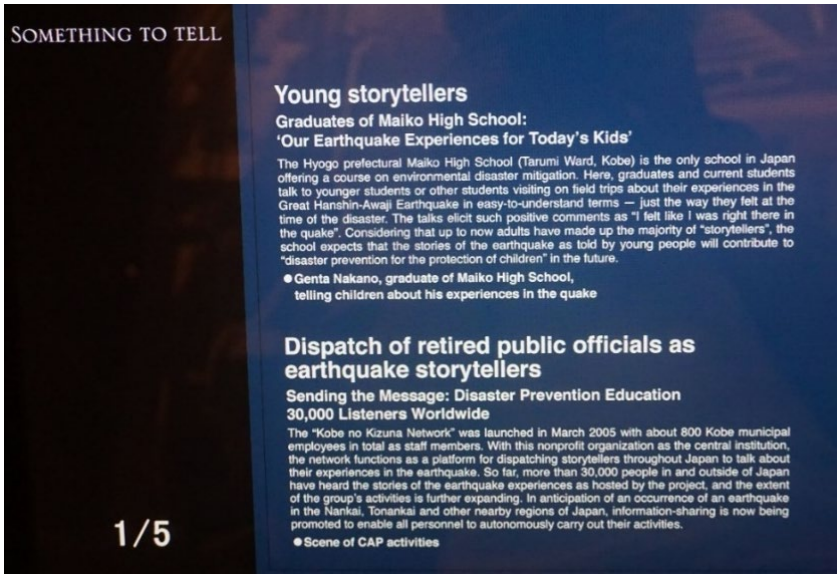


Figure 5.39. The younger generation are passing on the stories told by those who experienced the earthquake in 1995. Photo by Louise Bailey, 2019

Figure 5.40. An older man relating stories at the Storyteller's Corner in the DRI. Photo by Louise Bailey, 2019

Figure 5.41. Inside the display room at the DRI. Image: "Gov. Inslee visited the Disaster Recovery and Human Renovation Institution in Kobe, Japan" by WaStateGov is licensed under CC BY-ND 2.0

Figure 5.21. A diorama of traditional housing constructed in timber many of which were destroyed in the fires that raged after the earthquake. Photo by Louise Bailey, 2019

Figure 5.43. A life-size diorama of a street scene immediately after the disaster. Photo by Nippon.com https://www.nippon.com/en/guide-to-japan/gu900132/remembering-the-1995-kobe-quake-places-to-visit-in-the-city.html

Figure 5.44. Photographs of street scenes taken at the time of the disaster and a video documentary screen to the left and a diorama image of the aftermath. Photo by Louise Bailey, 2019

Figure 5.45. Scenes of monks praying at sites of tragedy. Photo by Louise Bailey, 2019

Figure 5.46. Street scenes of recovery indicate how life returns to normal. Photo by Louise Bailey, 2019

Elementary and junior high school groups visit the institution and begin with a 30-minute lecture by one of the researchers with a twofold intention of learning about what happened in the 1995 earthquake, and to learn about future disasters and preparedness for the events, (Figure 5.46).[286] The total number of Disaster Renovation Institution visitors in 2018 was 507,595 including 31,697 foreign tourists. The challenge for foreign visitors at these centres is the lack of translation into English and other languages, although English translation was available at the Disaster Renovation Institution, as shown in Figure 5.37, Figure 5.38, Figure 5.39 and will be discussed further under Interpretation in Chapter 5.

Further facilities offered at the Disaster Renovation Institution include a library on the fifth floor, education classrooms and lecture theatres. The East building houses another theatre and programmes for learning about the value of water as a source of life and exhibits about the threat of tsunami.

[286] Personal communication with guide

Figure 5.47. Classroom activities at the DRI with the assistance of fulltime researchers. Photo by Louise Bailey, 2019

As two of the educational memorials Illustrate the preparedness focus of Japan's future-proofing for eventual disasters, Hokudan Earthquake Memorial Park Nojima Fault Preservation Museum will be discussed in brief, as it is a notable point of difference and is discussed in Chapter 5.1.5 as a retained memorial. A portion of the memorial displays a section of the landscape that is retained to illustrate the damage resulting as the fault line erupted. It is also a memorial that is visited by school groups for education in preparedness and by tourists. As it is located on Awaji Island, a 20km drive from Kobe with limited bus transport, it is less accessible than both the Disaster Renovation Institution and Arahama Elementary School. On the day of the site visit there was a group of high school students, and a few independent visitors. Admission costs, further discussed in Chapter 6, is NZ$11.00 for an adult and NZ$5.00 for children over the age of eleven and NZ$3.00 for children younger than eleven. An introductory video with explicit footage of the disaster is open to all ages, (Figure 5.48, Figure 5.49, Figure 5.50).

There are no classrooms at this site for educational purposes, but students learn about the geology of earthquakes, and are able to experience the intensity of the earthquake in the simulator. The retained house in a destroyed state demonstrates the need to secure belongings and if well-built, and constructed in concrete not timber, it will survive even if it is only metres away from the main fault line.[287] Up until 2011 the museum attracted 7.9 million visitors since its opening in 1998.

Figure 5.48. Images of destruction are shown to all ages. Photo by Louise Bailey, 2019

Figure 5.49. The map of Japan highlights disaster prevention promotion areas. Photo by Louise Bailey, 2019

[287] (Otake, 2011)

Figure 5.50. The caption at the bottom of the screen states, "We must never forget this," and shows images of Meriken Park, Kobe. Photo by Louise Bailey, 2019, of a panorama in the video.

A re-purposed, museum-education centre at the Ruins of the Great East Japan Earthquake: Sendai, Arahama Elementary School is simpler, less formal than the DRI, and although the material exhibited is less high-tech the opportunity for visitor participation and contribution is provided. A video of the tragedy which appeared as a recurring display feature is also played here, as shown in Figure 5.51. An interesting past sets it aside as a melancholic memorial. All 320 teachers, students and some local community evacuated to the roof of the school during the tsunami and watched as their homes and surrounding forest below were engulfed, (Figure 5.52 and Figure 5.53). They all survived due to their swift response. However not all Arahama residents were as fortunate and 200 people of the 2,000-population died. The Sendai coastline is long, and land elevation is low and flat in the Sendai plain, making retreat to higher ground challenging for those near the coastline. Arahama School is 700 metres inland from the shoreline and inundation reached the second floor of the school building at a height of seven metres.

The Chile earthquake and tsunami in February 2010 had prompted the school to review its disaster prevention measures and action was taken to use the roof top of the school rather than the gymnasium which was a separate building on the ground. The now demolished gymnasium received massive damage. Emergency supplies had been relocated from the gymnasium to the third floor making them accessible for the overnight shelter.[288] Temperatures overnight plummeted to -15 degrees Celsius and survivors waited until the next day to be rescued by helicopter from the rooftop. Writing in white chalk on the blackboard states, "Kindness and gratitude in these hard times", and reflects the challenges of those who made this their home in anxious conditions for one night. The school was used as temporary accommodation for some whose homes had been destroyed.

[288] (United Nations Office for Disaster Risk Reduction, 2019)

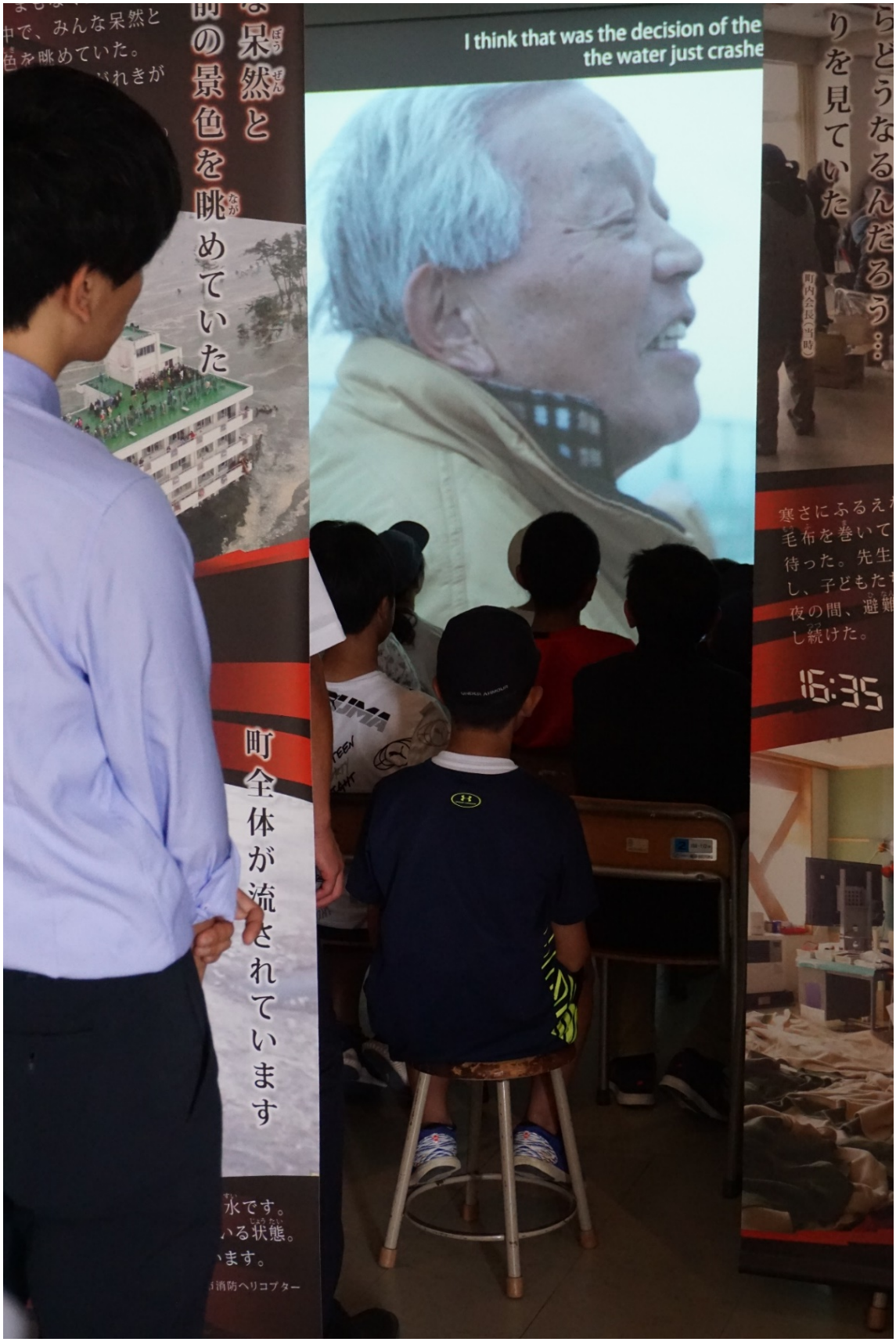


Figure 5.51. School children watching a documentary of the tragedy as it unfolded and stories of survivors. Photo by Louise Bailey, 2019

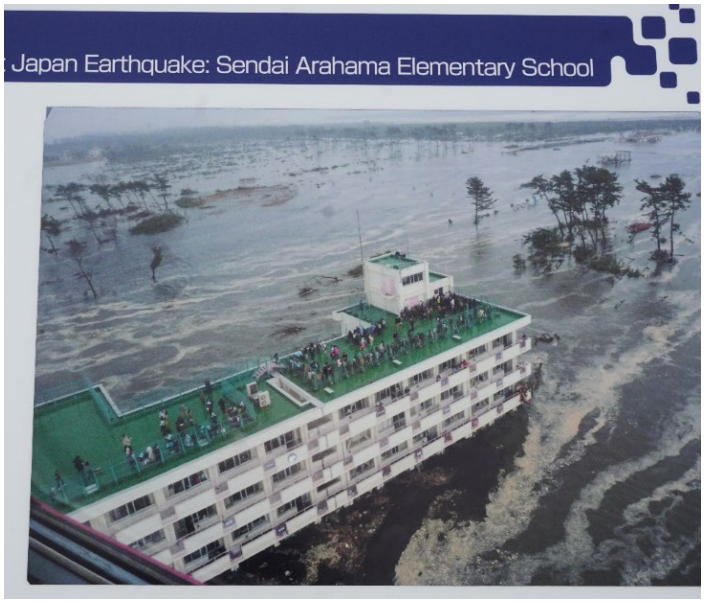


Figure 5.52. Photograph taken from an information panel display at the Sendai Arahama Elementary School. It depicts the students and teachers taking refuge from the tsunami on the school roof.

Figure 5.53. View from the rooftop of the school to the coastline where housing once stood. Photo by Louise Bailey, 2019

At the time of visiting there were five buses and a minivan of organised groups as well as other visitors: a school group, business groups, (Figure 5.54), and independent visitors, all Japanese people, an indication that the memorial is highly visited. Throughout 2018 and 2019 200,000 people visited the site which is open to the public and admission is free.

Some of the classrooms are converted into thematic display rooms, for example Room 3 is the History and Culture of the Arahama Area which displays a diorama of the landscape as it was pre-disaster, as depicted in Figure 5.55. Debris was removed from the building, although not to the extent that signs of damage are no longer visible, as shown in the images displayed on the walls, (Figure 5.56). Messages can be written on the blackboard, by visitors, (Figure 5.57) and post-it-notes on panels in the hallway express emotions of sadness, anger and love.

A short documentary tells the tale of the tragedy as it occurred and the experiences of those who survived. As was commonly found at the memorials and education centres in Japan, children are exposed to the harsh realities of the tragedy through graphic images and face the knowledge that they are likely to experience this in their lifetime.

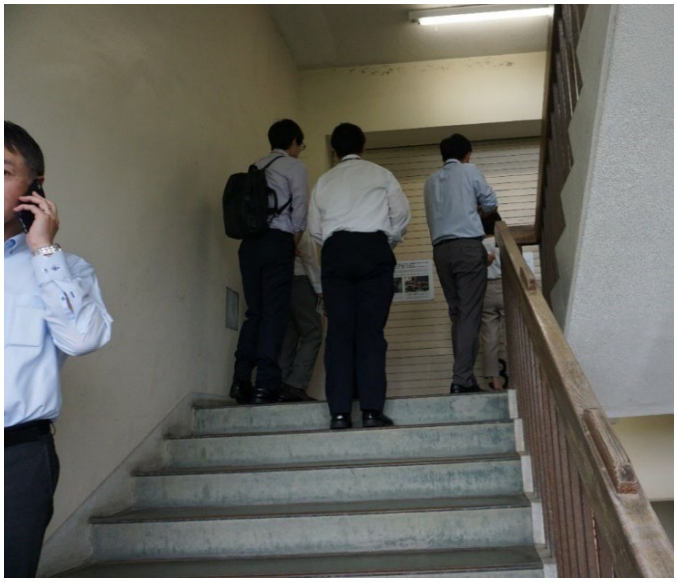


Figure 5.54. A business group reading information on a stairwell. Photo by Louise Bailey, 2019

Figure 5.55. A diorama of the Arahama area showing the location of the school marked by the black flag circled. Photo by Louise Bailey, 2019

Figure 5.56. Damages still evident on one of the upper floors and images illustrate the debris that filled the internal space. Photo by Louise Bailey, 2019

Figure 5.57. A blackboard where messages can be written. Photo by Louise Bailey, 2019

Past experience of natural disaster places education and public awareness at the forefront of strategic planning in Japan and each Prefecture has its own framework to ensure the delivery of efficient measures to reduce the impact of future disasters. *The Sendai Framework for Disaster Risk Reduction 2015-2030* among its many goals states, "to promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training."[289] The framework focuses particularly throughout the document on "empowering women and persons with disabilities to publicly lead and promote gender equitable and universally accessible response, recovery, rehabilitation and reconstruction."[290] It was noted at educational memorial sites, the majority of business visitors were male and such documents may suggest a move to include women in higher level decision making. Since the report was published, the establishment of the Women Support Center with a human resource development programme for women titled "Decision-making and taking Action," encourages women to take the 6-month course. Events themed around women and disaster risk reduction addressed issues raised by women that were not well managed in the 2011 disaster.[291]

The document further states that at a national and local level it is important to "establish community centres for the promotion of public awareness and the stockpiling of necessary materials to implement rescue and relief activities,"[292] and to "promote regular disaster preparedness, response and recovery exercises, including evacuation drills, and the establishment of area-based support systems, with a view to ensuring rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-food relief supplies, as appropriate to local needs."[293] The Sendai City website lists the Community Disaster Prevention Centers under each locality totalling 95 centres for a population of 1 million and many of these are schools and parks. The centres are used for disaster prevention activities as well as evacuation centres in disaster emergencies. Some parks in Japan contain storehouses with emergency equipment as shown in Figure 5.58. In 2013 all 80,000 Sendai City elementary and junior high school students received a copy of the Sendai Original disaster prevention education textbook: "From 3.11 to the Future" (Figure 5.59).

[289] (United Nations Office for Disaster Risk Reduction, 2015) Section 24 (l)
[290] (United Nations Office for Disaster Risk Reduction, 2015) Section 32
[291] (Sendai City, 2020) Section 5
[292] (United Nations Office for Disaster Risk Reduction, 2015) Section 33 (d)
[293] (United Nations Office for Disaster Risk Reduction, 2015) Section 33 (h)

Figure 5.58. Storehouse installed in a park. Image source, (City of Kobe, 2010)

Figure 5.59. "From 3.11 to the Future" educational material distributed to all school students in Sendai City.

https://sendairesilience.jp/en/efforts/residents/02.html

The Cabinet Office in Japan offers "Disaster Management Specialist Training Courses for national and local government employees, to build capacity to respond swiftly and accurately to crises and to develop networks of national and local government organizations."[294]

Each prefecture, city and ward offer at least one memorial and associated educational museum. Table 3 includes a limited number of case study sites, but there are other notable examples, such Nobiru Station- Higashi-Matsushima 3.11 Disaster Recovery Memorial Museum, (Figure 5.60). Situated in a small village that was completely destroyed in the tsunami and relocated further inland from the shoreline on higher ground, the memorial and twisted train tracks remain in place as a reminder. Sendai 3/11 Memorial Community Center, a further example outside the group of case study sites in Table 3, is unique in that it is located in the newly built Arai train Station and is only a short distance from the Arahama Elementary School. My findings indicate that education is a common focus for memorials in Japan. Although it is necessary to focus on a limited number to fit

[294] (Cabinet Office, 2019) p.101

within the scope of this thesis, these examples indicate the level of gravity given to knowledge of natural disasters throughout Japan.

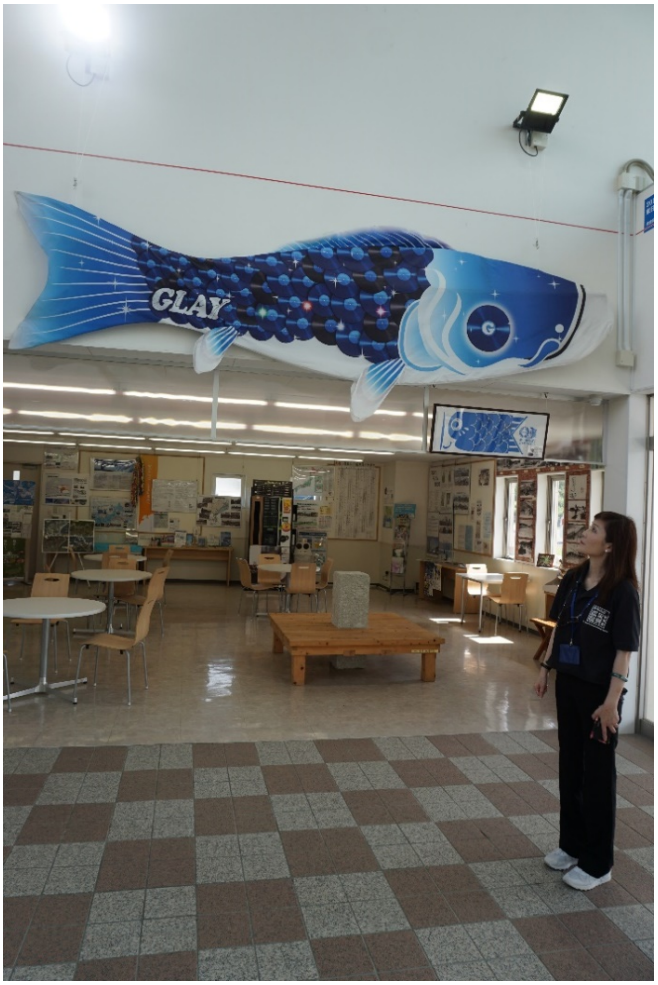


Figure 5.60. A red line painted on the internal wall of the 3.11 Disaster Recovery Park, Nobiru station, indicates the height of the tsunami. Photo by Louise Bailey, 2019

Canterbury the most recent province of New Zealand experienced tragic and catastrophic natural disasters relies on Quake City and the Kaikoura Museum for education of the earthquakes that occurred. They are visited mostly by tourists and school groups seeking to learn about the events, but they do not provide sessions on preparedness or education for the next disaster.[295] Civil Defence, a New Zealand Government supported department that relies on volunteers is working within communities to inform them of the impending Alpine Fault with a 30% probability of a magnitude 8 earthquake in the next 50 years. I attended an information evening that was promoted in the Selwyn district (Figure 5.61) and held at Lincoln Events Centre in March 2020 to observe the level of information that was available.

The meeting room seated approximately 120 people, with most attendees appearing to be mature in age, some living in rural parts of the Selwyn District, noted by the numbers who responded to

[295] Personal communication Quake City guide

having a power generator on their property. A video provided by Canterbury University was played outlining the science of the fault, and several people spoke of the implications of the earthquake and subsequent landslides along the Southern Alps. The message to the community was that they will need to look after themselves and support each other as all emergency services will be re-directed to the West Coast, the predicted worst affected area of New Zealand. Although a Civil Defence Headquarters will be operating from a specially, earthquake proofed space in the Selwyn District Council buildings it will be used as the point of distribution of aid to the West Coast and resources will not be available for local assistance. There would be evacuation centres locally, but it was not clear where they would be and whether they would supply any provisions such as blankets, shelter, ablution and cooking facilities. Most people, Civil Defence confirmed, would be without power and water for an unknown period.

Figure 5.61. A billboard in rural Lincoln advertising the information session. Photo by Louise Bailey, 2020

5.3.4 Protection Roads, dams, levees, parks, towns moved to higher ground

A natural disaster often triggers preventative measures to lessen the damage to buildings and roads as well as changes in legislation to improve building standards and designation of land unsuitable for human occupation with the aim of preserving expensive infrastructure and to save lives. These changes in the landscape are considered memorials and hold a memory to a time and place. Such measures are often visible in the landscape as they transform a known landscape into an unfamiliar landscape. Case sites to exemplify these changes include two sites in Japan: the dams and levees in

Ishinomaki and Rikuzentakata, the Safe stations in Sendai; and one site in New Zealand, State Highway 1 North of Kaikoura.

Japan already had large-scale tsunami breakwaters along the Sanriku Coast prior to the 2011 tsunami as smaller waves were known and expected. Those shown in Figure 5.62 have been restored since the tsunami. Another countermeasure along the coastline is the seawalls that stretch 300 kilometres. Reliance on the safety of the seawalls had given the inhabitants security. However, the height of the 2011 tsunami was unprecedented, and the seawalls were breached, flooding towns and cities and wreaking havoc. Control forests along the coastline also act to slow down the advance of the tsunami waves and to trap debris before it enters the towns and cities.[296] Depending on the height of the tsunami at the time of invasion many forests were destroyed, but where the height of the waves was lower forests survived. The Miracle Pine as previously discussed in Chapter 5, page 104 is the lone surviving tree in a forest of 70,000 trees on a 2-kilometre shoreline stretch in Rikuzentakata and in that case "the forest not only could not protect the town but also increased the impact of the tsunami because of floating debris."[297] Already discussed, a few buildings provided protection and a safe retreat such as the Arahama Elementary School, but in many cases the buildings did not withstand the rigours of the tsunami. The financial burden of the cost of reconstruction must be borne by future generations and is a significant consideration in decisions of implementing infrastructure.

The sea walls in Ishinomaki that are situated at the edge of the shoreline and are solid concrete structures between 12-15 metres high (refer to Figure 4.33 and Figure 4.34). Concerns raised over the potential loss of biodiversity in the natural coastal ecosystems are "aesthetically displeasing, heavily impacting tourism activities while also detaching the local community from the sea."[298] In 1927 the treed shoreline, Takata-Matsubara was designated as a place of scenic beauty.[299] During the reconstruction phase these monolithic structures are sublime in their scale and landscape impact, and became landmarks in their location.

The sea wall in Rikuzentakata, (refer to Figure 4.23), which required the removal of soil from an adjacent mountain to be shifted via a conveyor belt to the construction site and to elevate ground levels by 10 metres for the relocated township. It would have taken 10 years for trucks to shift the soil which the conveyor belt shifted in 2.5 years.[300] The re-construction of Rikuzentakata applied the

[296] (Suppasri et al., 2013) p.1003
[297] (Suppasri et al., 2013) p.1002
[298] (Santiago-Fandiño & Mas, 2018)
[299] (Sugio, 2015) 4.1.2
[300] (Centre for Liveable Cities Singapore, 2016)

national strategy of “Build Back Better”. The official guide explained that in the slow pace of recovery the population numbers have not recovered to pre-tsunami figures and many people moved away to find work, live in a safer environment, and the younger generation who were already leaving for the bigger cities for a more active social life as they matured and left school, have gone. Faith in the new seawall is dubious with some who feel protected and others who still feel unsafe, explained the guide.

Figure 5.62. Breakwaters out in the sea and at the water’s edge in the bay at Ishinomaki. Photo by Louise Bailey, 2019

4 Development of tsunami evacuation

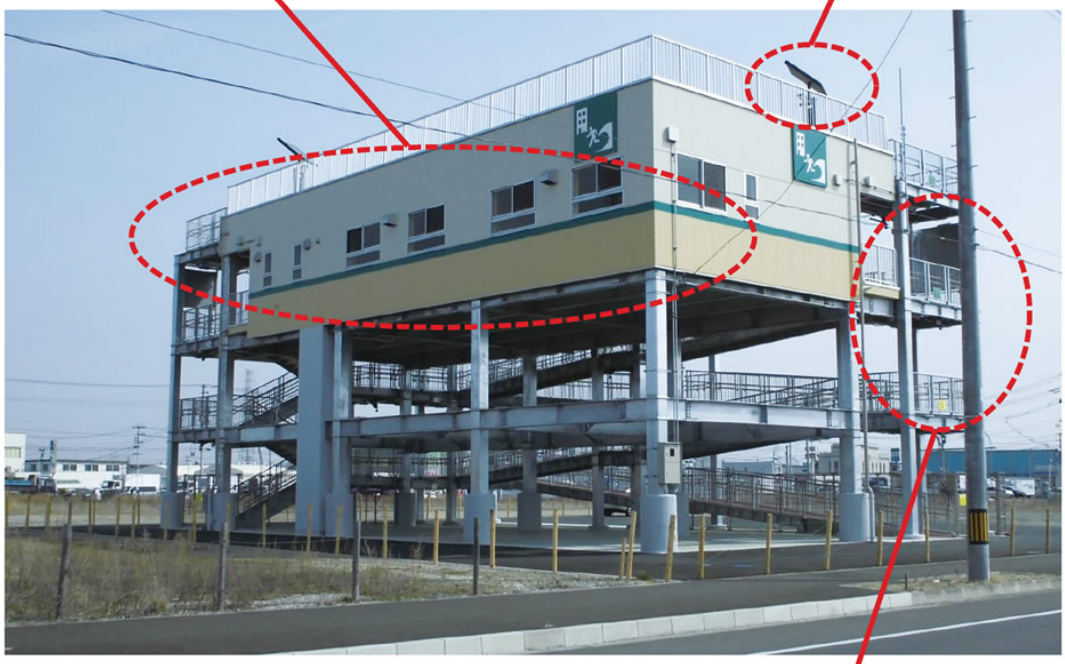
The City of Sendai constructed tsunami evacuation facilities at 13 coastal arealocations: 6 tsunami evacuation towers, 5 tsunami evacuation buildings, and 2 outdoor tsunami evacuation stairs.

① Tsunami evacuation tower

- Structure: Steel-frame construction (two-story)
- Height from the ground: Indoor evacuation space: about 6.5 m, rooftop evacuation space: 10 m
  The height is sufficient from the projected depth of tsunamis.
- Measures against tsunamis: By taking into account the liquefaction, tsunami wave force, and collision of floating wreckage, foundation piles of more than 20 meters were driven into the ground to create a strong structure that can withstand tsunamis.
- Securing the means for external communication:
  Radio equipment for disaster management administration is installed at each tsunami evacuation facility so that evacuees can contact the disaster response headquarters of the City of Sendai.

- Measures to provide protection against the cold and wind:
  Evacuation spaces enclosed by external walls are ensured. We also stockpile blankets and cartridge gas stoves.

- Measures against nighttime power outages:
  A pole-mounted photovoltaic panel is installed on the rooftop to illuminate the stairs, slopes, and rooftop and facilitate evacuation even during nighttime power outages. We also stockpile cartridge gas generators and LED floodlights.



▲Tsunami evacuation tower

- Consideration for people requiring assistance during a disaster:
  The tsunami evacuation towers are designed to enable evacuation in wheelchairs and strollers on slopes.

〈Budget〉

Construction cost: 170 million yen/tower (average)
Maintenance cost: about 0.9 million yen/year
The project is subsidized by the national government (approx. 2,200 million yen).

Figure 5.63. Evacuation towers Sendai. Source: https://sendai-resilience.jp/media/images/en/efforts/practice5.jpg

Sendai provides a number of evacuation towers recently installed along the coastline in places where there is limited time to retreat to safer ground from the oncoming tsunami. The document on the Sendai City website explains the function of the evacuation towers and facilities offered in times of emergency, (Figure 5.64). Evacuation towers are steel-structured two-story evacuation facility capable of accommodating 300 people at levels higher than 6 m. The first of these was completed in February 2015. By the end of the 2016, 13 evacuation facilities, including evacuation towers, had been completed in Sendai City. At the time of the site visit these towers were highly visible in the flat open expanse of unbuilt and mostly agricultural land and serve as a reminder of the vulnerability of people against nature, but also give reassurance of protection, (Figure 5.64).

Figure 5.64. An evacuation tower in a flat open landscape near the coastline in Sendai. Photo by Louise Bailey, 2019

In many places the levees formed between an outer seawall and an inner wall of lesser height is land that is deemed unsuitable for future urban development and is re-purposed as agricultural land or parks. Ishinomaki Minamihama Tsunami Recovery Memorial Park, Miyagi Prefecture, covering an area of 40 hectares, was to be completed in time for the Olympic Flame in 2020, and includes a pond, wetlands, a pine tree forest along the coastline and an evacuation hill, (Figure 5.65). A space, the "mourning plaza," is provided with a capacity for up to 3,000 people to attend remembrance ceremonies.[301] To the inland area of the site the remains of the Kadowaki Elementary School, which was devastated by fire after the tsunami, is retained as a disaster memorial. Further protective measures include a riverside promenade and embankment along the Old Katakami River, (Figure 5.66), and multiple parks and disaster prevention green zones throughout the city.[302] Approximately 14,000 residents required temporary accommodation following the earthquake and tsunami with the upper floors now used as evacuation areas. [303] [304]

[301] (Magdefrau, 2016) p.189
[302] (Magdefrau, 2016) p.190
[303] (Teppei Kobayashi, 2016) p.483
[304] (Magdefrau, 2016) p.190

Figure 5.65. Plan of the Tsunami Recovery Memorial Park in Ishinomaki. Image source: Magdefrau, 2016, p.190

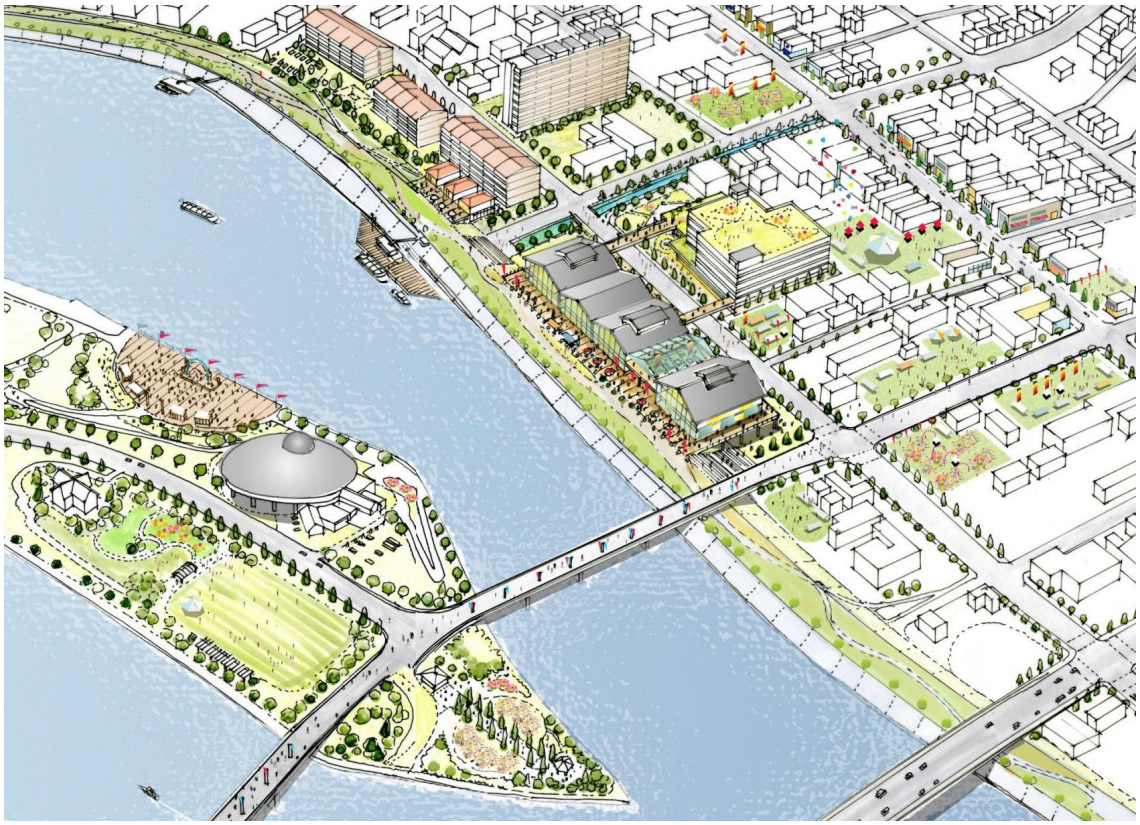


Figure 5.66. Concept design for the riverside embankment in central Ishinomaki. Image source: Magdefrau, 2016, p.190

Visual reminders in the New Zealand landscape reveal the forces of nature and State Highway 1 on the coast north of Kaikōura is an example of a significant and dramatic landscape change. The protection that the newly constructed road and rail along the coast where mountains meet the sea offers a different form of protection from the Sendai evacuation towers and the dams and levees of Japan's coastline. The raised road, reconnection of rail and strengthened mountain slopes protect against future landslides that cut communities off from goods and services, affecting a vibrant tourist economy. Seawalls were constructed to raise and strengthen the road to resist future damage from earthquakes. Care was taken to maintain ecological principles and minimise losses or permanent impacts on habitats in an area that is protected by legislation for its marine and terrestrial environments.[305]

The museum in Kaikōura township includes a section dedicated to the 2016 earthquake and reconstruction of the road. Stories of personal experiences are told by the local community in a video that plays repeatedly in the same room as other exhibits. Dioramas submitted by members of the community (Figure 5.67), depict the reconstruction of State Highway 1 and the rail link that isolated them from the outside world. The new road is wider and more streamlined than the old road and provides bays for visitors to stop and appreciate the scenic beauty and watch the seals on the rocks below the raised sea wall (Figure 5.68, Figure 5.69 and Figure 5.70).

Figure 5.67. A diorama in the Kaikōura museum depicting the reconstruction of State Highway 1. Photo by Louise Bailey, 2019

[305] (New Zealand Transport Association, 2020)

Figure 5.68. The newly constructed seawall which extends along the Kaikōura coastline. To the far right is a protective bank as a multi-level form of protection. Photo by Louise Bailey, 2019

Figure 5.69. Off road parking allows tourists to stop and watch the seals. Photo by Louise Bailey, 20

Figure 5.70. Seals on the Kaikōura coastline- a protected habit. Photo by Louise Bailey, 2019

5.3.5 Not Forgetting

All memorials have a message of not forgetting the tragedy, but this message is less evident in a some of the memorials and therefore not noted as a dark cell in Table 3. Not forgetting is a strong element in the greater number of memorials and is discussed throughout Chapter 5 in relation to the memorial case and at a deeper level in Chapter 5.3.3 where not forgetting is a strong message in education and preparedness for future events.

Commemorative events are often choreographed to arouse emotions. The highlight of the commemorative events which receives visitors from all over Japan and international travellers is the Kobe Luminarie held in December each year (Figure 5.71). Kobe was plunged into darkness in The Great Hanshin-Awaji Earthquake in 1995 and the Italian Government donated the lights to bring hope, and recovery and attract tourists back to Kobe. Although the show was only intended to be exhibited once in 1995, the success and volumes of people it attracts, around 4 million, allowed it to continue to be reproduced with a different design each year. The design was produced by Valerio Festi Italina artistic director in collaboration with Hirokazu Imaoka.[306] Visitors follow a slow, crowded procession through streets that are closed for 4-5 hours each night from Motomachi shopping mall

[306] (wikipedia.org, 2019)

terminating in Higashi Yuenchi Park. Energy to light up the sky is produced from biomass putting no strain on the city's electrical generation. In her blog about attending the festival Goh Qui Ting said, "It felt almost like I was on a pilgrimage – to remember, in loving memory of the victims of the earthquake, to be reminded to take precautionary measures and to always be prepared for emergencies as people rebuild their lives with strength, resilience and hope for the future.[307] Video footage of the event shows the lights being switched on at 6:00 p.m. The crowd waits to the sounds of an ecclesiastical choir, and as the lights illuminate the display, bells ring, gasps can be heard and cameras flash.[308]

Figure 5.71. Luminarie light show in Kobe December each year. Each bulb is a memorial light for the souls of the 1995 earthquake victims. Image: "Nikon Z6 , Z24-70mm/F4S , Kobe Luminarie" by idua_japan is licensed under CC BY-NC-ND 2.0

5.3.6 Tourism

Throughout the study, it is clear that tourists visit memorials worldwide and nearly all the sites in the study with the exception of Ishi-no-kinendo are frequently visited. The number of visitors to the memorials varies with some for example Oi Manawa being visited on a regular basis as the local community go about their daily lives. The memorials of Quake City in Christchurch, the Miracle Pine and Port of Kobe Memorial hold a purpose that is more about attracting tourism rather than commemoration or education.

[307] (Ting, n.d.)
[308] (Nippon.com, 2019)

Quake City in Christchurch is located on the tram route, a tourist attraction that stops at predetermined places of interest for tourists. The guide explained that most people set it as a destination in their travel plans. It is not clustered in association with any other significant or tourist related activities. Discussion with one of the hosts at Quake City (Figure 5.72), revealed that 95% of the visitors are tourists and of the 5% local community many of those are school groups. Admission is $20 for an adult, $16 for students and seniors, $8 for children under 15 not accompanied by an adult and free for children under 15 accompanied by an adult. Local school groups pay a fee of $2 per student the balance being paid by the Ministry of Education, and the study is usually integrated into the school curriculum similar to the groups that visit the Canterbury Museum. Admission costs are discussed in Chapter 6 with relevance to commodification and purpose of the memorial.

The host at Quake City noted that tourists who visit the centre arrive with an informed agenda of places to visit and why they are interested. The majority of visitors are from Germany, France, Holland and England with a lesser number from India although they distinctively travel with the whole family and are well informed of the disaster that occurred. Further discussion with the host, revealed that the only language offered other than English is Chinese, and yet few Asian tourists visit as they are usually on tours and are taken by the tour companies to attractions without an entry fee such as the Canterbury Museum. Larger tour groups of 30 or more would not easily be accommodated in the small exhibition space. The French visitors comment to the hosts that the lack of translation is a concern for them although the visual approach to communication makes much of the information accessible. Clocks from the old railway station building in the entrance, (Figure 5.72, Figure 5.73), since demolished, are indicative of the displays throughout the centre as well as community initiatives such as Hearts for Christchurch (Figure 5.74), and a documentary relating the story of the earthquakes.

Comments made to the hosts as visitors conclude their experience include, “very sobering”, “why do you stay here?’, and “I had no idea it was so bad”, many leaving in tears. The victims are not a focus of the exhibits and are not named. A photograph of the Oi Manawa memorial is exhibited at Quake City and visitors often ask where the memorial is located, but there is no publication available providing directions. Explanation of the tragedy is engraved on the wall at Oi Manawa outlining the date and number of deaths. A link between the memorial and Quake City is not made at either location, and without a spatial connection tourists may not visit both (refer to map Figure 4.39).

Figure 5.72. Entrance to Quake City showing clocks on the old Christchurch railway station building when they stopped ticking at the time of each of the earthquakes. Photo by Louise Bailey, 2020

Figure 5.73. Clocks on the tower of Christchurch railway station which was demolished post-earthquake. Image source: https://christchurchcitylibraries.com /heritage/photos/disc10/IMG0041.asp

Figure 5.74. Hearts for Christchurch were sent from stitch-craft groups around the world and were exhibited at Canterbury Museum until February 2012. Photo by Louise Bailey, 2020

A further example of a memorial with a main purpose in attracting tourism is the Miracle Pine in Rikuzentakata discussed in the thesis in its status as a remnant memorial, refer to chapter 5.1.1 and details in chapter 4.3.2. The tree receives wide coverage on the internet with many tourism sites exclaiming the story of its survival and subsequent preservation. The Iwate Tsunami Memorial Museum opened in September 2019 alongside the tree and will be set in a landscape of newly planted pines, lakes, and a promenade along the seawall. The Mayor of Rikuzentakata declared a strategy to bring life back to the town by making it a tourist destination likening the tree to the Hiroshima Dome.

In 2019 the 3.11 Densho Road project was launched in Sendai. It is a collaboration, "by industry, academia, government, and citizens to pass the lessons of the earthquake disasters,"[309] between many of the affected towns and cities, and to connect and, "establish a system that helps visitors learn about the disaster effectively."[310] Among the 224 disaster-related sites registered to link into the initiative is the Iwate Tsunami Memorial Museum which received 100,000 visitors in the first four months of its opening.[311] Concern had been raised that "the records and memories of the disaster may fade with time,"[312] and the key objectives are to use the facilities for disaster prevention education and to enhance tourism.[313] The mission statement includes, "The Great East Japan Earthquake Tsunami Tradition Museum aims to learn from the wisdom of its predecessors,

[309] (World Bosai forum/IDRC 2019 in Sendai, 2019)
[310] (Jiji, 2020a)
[311] (Jiji, 2020a)
[312] (World Bosai forum/IDRC 2019 in Sendai, 2019)
[313] (World Bosai forum/IDRC 2019 in Sendai, 2019)

share the facts and lessons learned from the Great East Japan Earthquake and Tsunami with people all over the world, and realize a society that is resilient to natural disasters."

The third memorial to be categorised as having the main message of tourism is the Port of Kobe Memorial which is discussed in Chapters 4.2.2 and 5.1.2 as a ruin. The port of Kobe was rapidly rebuilt following the 1995 earthquake to aid the economy of the region and a section of the original port was preserved in a destroyed state. As already mentioned, there are panels of information, Figure 5.75, conveying the reconstruction of the wharf which includes Meriken Park a large open space easily accessed from the central retail and business district offering recreational opportunities. Among the many activities is the Be Kobe monument, installed to commemorate the 150th anniversary of the port in 2017. It is a popular photographic backdrop. The Port of Kobe Memorial is located at the entrance to the park and at the time of my site visits on two consecutive days it was viewed and walked around by frequent visitors. There is no reference to those who died in the tragedy.

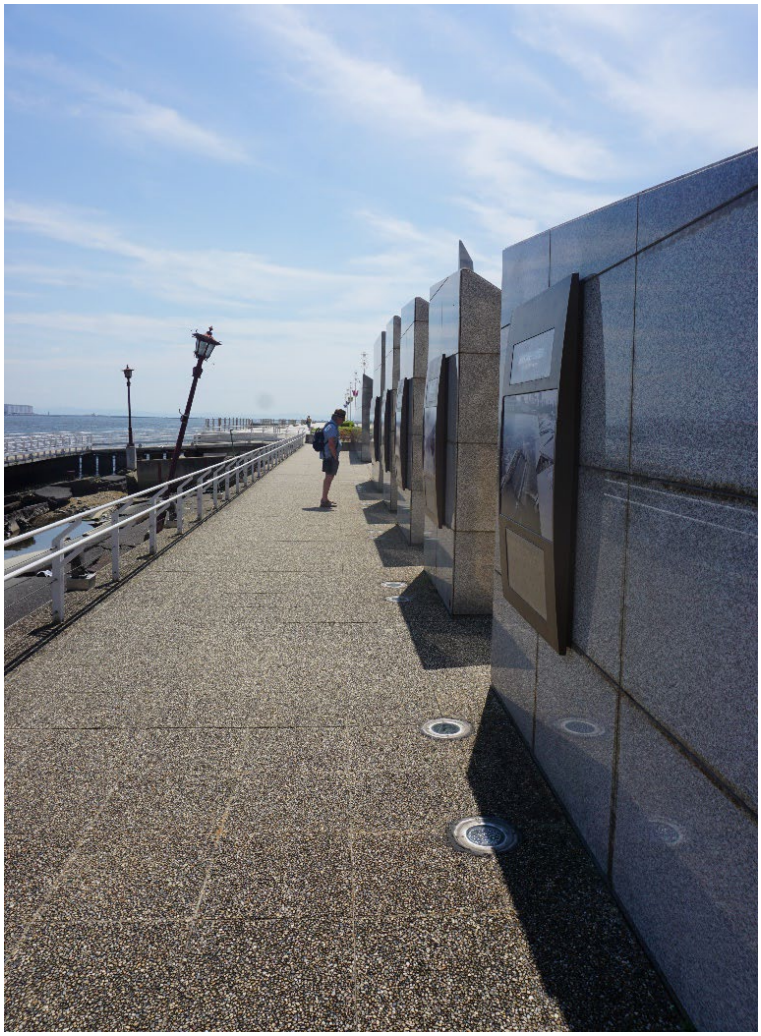


Figure 5.75. Panels of information on the reconstruction of the port adjacent to the preserved Port of Kobe Memorial. Photo by Louise Bailey, 2019

5.4 Interpretation

Memorials do not necessarily offer visitors from other countries information to further understand a tragedy other than the visual images that are presented to them. In some instances that suffices but having visited the sites in Japan the lack of translation was a challenge in some instances. For example, where information was available in Japanese without a translation no deeper understanding could be attained. Reading pamphlets and subtitles when available could be a distraction from being absorbed in the moment. Details such as personal messages on post-it-notes that were found at Arahama Elementary School and the 3.11 Community Center in Sendai were able to be understood only if they were graphic rather than written language. The naming of victims on memorials will be discussed in this chapter as it raises issues of how and why the names are to be placed, or in some cases not shown.

5.4.1 Translations

Of note in the case sites in Japan was the lack of accessibility of information for a non-Japanese speaking person which ranged from no translation to publications in multiple languages. On occasion an English-speaking guide was available. Table 3, page 102, shows that five of the case sites provide translation. It is not expected that the seawalls or State Highway 1 in New Zealand provide translation as no form of interpretation is required to make use of them, but it might be expected that sites attracting foreign speaking visitors would offer translation. The short documentaries played at several memorials, not all listed in Table 3, were subtitled in English and at Nobiru Station, Higashi-Matsushima 3.11 Disaster Recovery memorial Museum a documentary in English was screened solely for the two visitors present. Many are apologetic that there is no translation and at the Ishinomaki Minamihama tsunami recovery memorial park, I was given a CD of images and post cards with profuse apologies for the minimal information in English. The large sign in the centre of the photograph Figure 5.76 says “Ganbarou Ishinomaki” which translates to “stay strong,” the translation of which was found at the Ishinomaki Info Center [*sic*], Figure 5.77, and represents a community story of two men who set the sign up initially. Over time it decayed and was replaced by exactly the same sign but was built by the local Kadowaki Elementary School pupils, related Richard Halberstadt, Director of Ishinomaki Community & Info Center in a conversation at the centre. A sign (Figure 5.78) at the memorial park indicates a cameraperson filming the installation of the sign alluding to its fame. The park was still under construction at the time of the site visit and the exhibition centre visible to the left in Figure 5.76 is temporary. Pamphlets available inside the entrance at Arahama Elementary School, displayed in Figure 5.79, provide translations in English, Taiwanese, Chinese, Thai and Korean and guide the visitor through the displays in a chronological sequence floor by floor, with numbered items of interest.

Figure 5.76. The exhibition centre on the right at the Ishinomaki Minamihama tsunami recovery memorial park. Centre is the message of hope, "stay strong". Photo by Louise Bailey, 2019

Figure 5.77. The explanation of "Ganbarou Ishinomaki" sign at the Ishinomaki community & Info Center. Photo by Louise Bailey, 2019

Figure 5.78. A sign at Ishinomaki Minamihama tsunami recovery memorial park graphically illustrates community initiatives including the Ganbarou sign to the far right. Photo by Louise Bailey, 2019

Figure 5.79. Pamphlets available at the entrance of Arahama Elementary School in multiple languages. Photo by Louise Bailey, 2019

Figure 5.80. Location of the Memorial Tree Walk beside the Kitakami River and close to the Okawa Elementary School. Image source: Google Earth.

The memorials visited as case sites were either known prior to the journey or discovered through the snowballing method once in the region. One site was discovered by chance and any information indicating its purpose was in Japanese, but certain signs and images provided cues to its reference to memorialising the tsunami. For the purposes of this study it is named the “Memorial Tree Walk”. With little knowledge of its significance and any details that could be researched it is not included in Table 3 typologies, but serves as a clear example of the meaning conveyed in a memorial that offers no translation to a foreign speaking visitor as well as an intriguing approach to naming. It may be that this memorial is intended for the local community and not for other visitors but as it is on route to Okawa Elementary School from Ishinomaki and there is adequate parking it appears as an invitation to greater numbers who travelled some distance. The map Figure 5.80 shows the location of the walk, in relation to Okawa Elementary School.

Figure 5.81 shows the circular path surrounding the memorial and a meandering path the emanates from it following the line of the Kitakami River which lies to the right of the memorial beyond the raised embankment. The central stone displays a black granite inset of an aerial map of the location prior to the destruction caused by the tsunami as it shows housing along the banks of the river where it breached. Stones placed at the base of each flowering cherry tree along the walkway, Figure 5.83, are written in both Japanese script and English and therefore give a cue that it is a tsunami memorial. Of the 155 residents in the Magaki village 68 lost their lives. Their names may be placed on the memorial stone and they may be named on a stone at the base of each of the trees but that is an interpretation.

Figure 5.81. The Memorial Tree Walk. Photo by Louise Bailey, 2019

Figure 5.82. Stones placed at the base of the tree refer to the tsunami. Photo by Louise Bailey, 2019

While sheets of translated material are often available at memorials, the finer detail of spontaneous responses is not easily accessed without the language of the culture. Previously mentioned are the post-it-notes on boards, (Figure 5.84), in several memorial museums and although many drawings convey a simple graphic message the detailed message is lost to speakers of other languages. Messages are written in Vietnamese, English, and Chinese. The message on blue paper in Figure 5.83 reads:

> I want you all to never give up and even when times are tough stay strong.
> I am very sorry you had to go through all of this nonsense. I hope that all of these letters from everyone makes you feel comfortable.

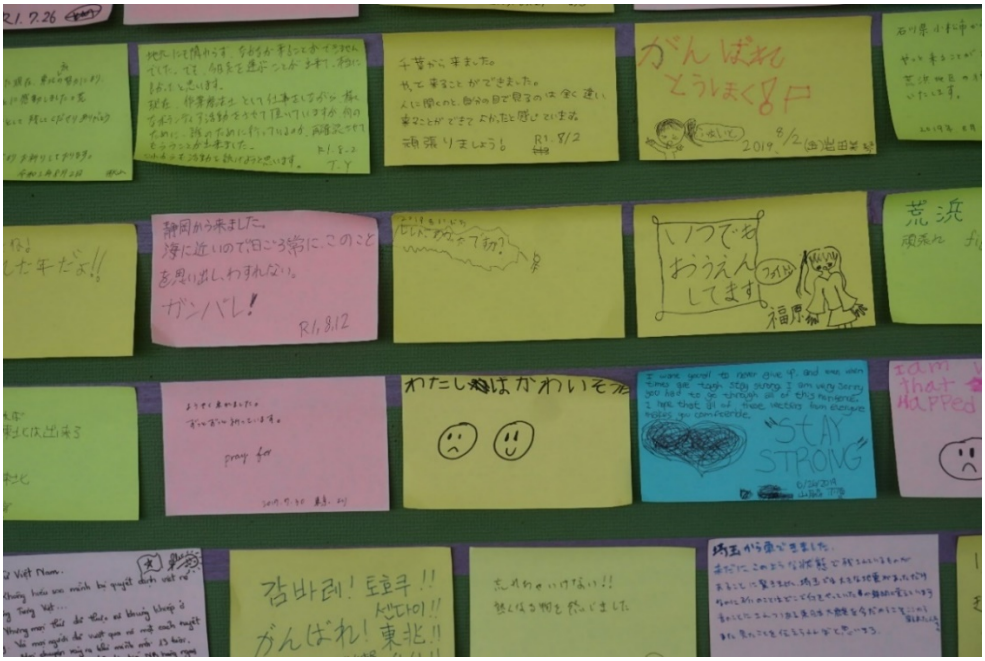


Figure 5.83. A post-it-note board at Arahama Elementary School shows several languages and graphics. Photo by Louise Bailey, 2019

Figure 5.84. Post-it-notes panels in the hallway at Arahama Elementary School. Photo by Louise Bailey, 2019

5.4.2 Names

Foote points out that western culture with a long history of placing the names of victims on memorials transfers that approach to most contemporary memorials.[314] Japan illustrates that placing names on memorials is also a practice of Eastern cultures but does not appear to be as common. Of the 14 memorials listed in Table 3, only one memorial in Japan (Cosmic Elements) and one in New Zealand (Oi Manawa) list the names of victims whose lives were lost in the natural disaster. The memorial at Nobiru Station in Japan, Figure 5.85, also lists the names of more than 500 victims lower than eye level making it difficult to read without bending down. This memorial was not included in the final selection of sites in Table 3. but it was one of two memorials in the Japanese case sites that listed names.

Cosmic Elements displays the names of many of the 6,437 victims on the circular concrete walls of the underground chamber, which is a private, quiet space away from the everyday gaze of passers-by, (refer to Figure 4.5 and Figure 5.22). The names are easily read at eye level. In contrast, the names of the victims of the 2011 Canterbury earthquakes are in public view although removed from street noise and the business of an urban environment. Decisions on how to place names, the grouping or sequence of nationalities, families, occupations and communities poses challenges in the design process and will be discussed in relation to theory in Chapter 6. Kohei Takahara, the guide

[314] (Foote, 2003) p.343

in Kobe, explained that the spaces left blank at Cosmic Elements are for those whose families found it too painful to see the names of loved ones, many of them children, etched into the brass panels.

Figure 5.85. Higashi-Matsushima 3.11 Disaster Recovery Memorial Museum displays the names of victims. Photo by Louise Bailey, 2019

A national memorial listing all the 22,000 names of fatalities in The Great East Japan Earthquake would require considerable space, but as already mentioned there are more than 72,000 names on the Thiepval Memorial. Nearly 3,000 names are inscribed on the 9/11 Memorial, and 185 names on the Oi Manawa memorial wall. Memorial Monument for Hiroshima, designed by Kenzo Tange, holds more than 290,000 names of victims to the bomb in a stone chamber in the centre of the arc, out of public view, with names being added as families request an entry in the volumes.

Some names on the memorial wall at Oi Manawa are grouped in relation to where the victims were when they died while others are placed randomly to reflect how the earthquake took lives. Names are written in their native language script and translated, (Figure 5.86 and Figure 5.87). At the commemoration service held on the anniversary of the Canterbury earthquake 22 February, the names of the 185 victims are spoken by the families and representatives. The formal commemoration is a time for loved ones to remember their loss and many lay stones, flowers and other items beneath the names on the wall as shown in Figure 5.88, Figure 5.89, and Figure 5.90. Many visitors run their hands across the names, that are placed at eye level, as they walk along the memorial, (see Figure 5.91, and Figure 5.92). There are signs that vistors return to their arrangments and tend the stones, flowers and messages as shown in Figure 5.93.

Figure 5.86. Translated names at Oi Manawa. Photo by Louise Bailey, 2020

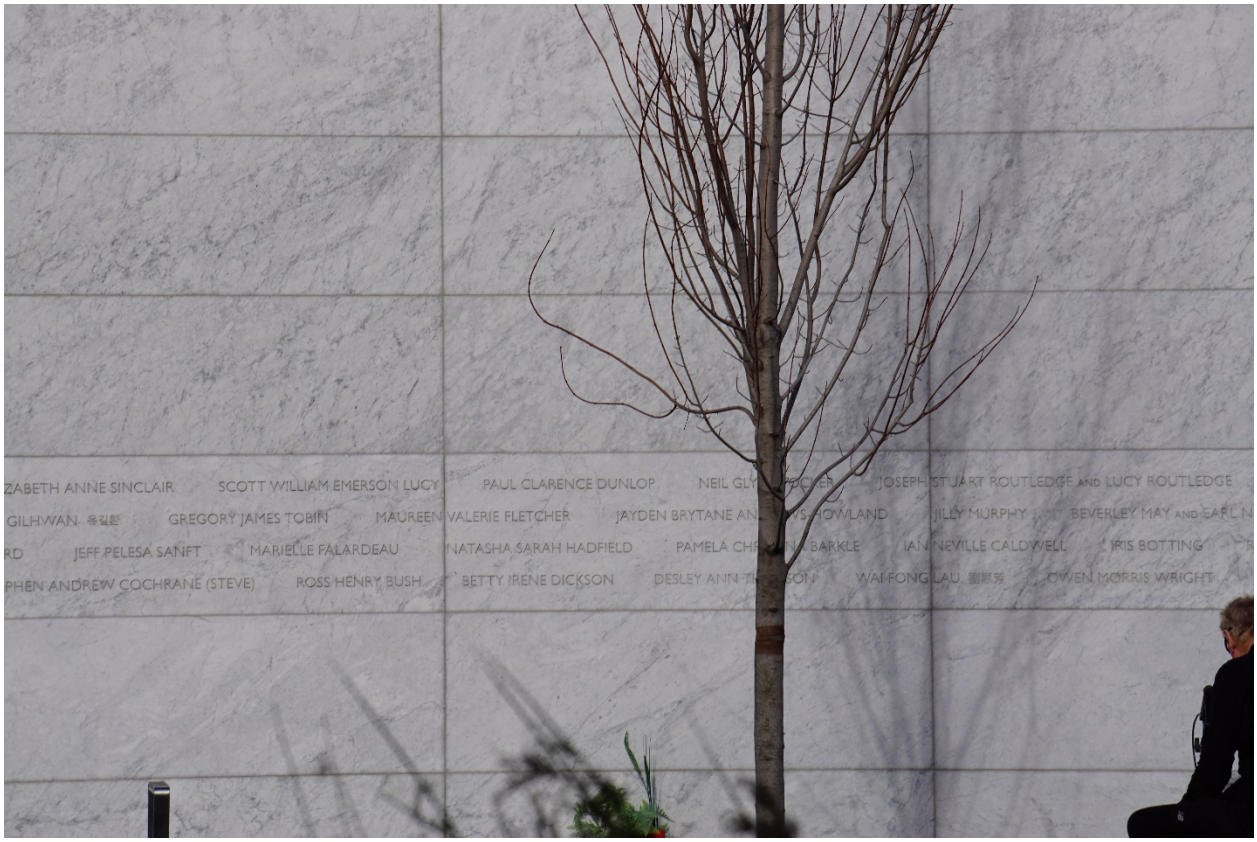


Figure 5.87. Names on the memorial wall at Oi Manawa. Photo by Louise Bailey, 2019

Figure 5.88. Personal messages and artefacts are left on the ledge below the name of a loved one. Photo by Louise Bailey, February 2020

Figure 5.89. Stones with and without messages are frequently left by names. Photo by Louise Bailey, 2020

Figure 5.90. A stone is placed at the base of a loved one's name on the day of commemoration. Photo by Louise Bailey, 2020

Figure 5.91. A paper butterfly is placed where the visitor touches the name in remembrance. Photo by Louise Bailey, 2020

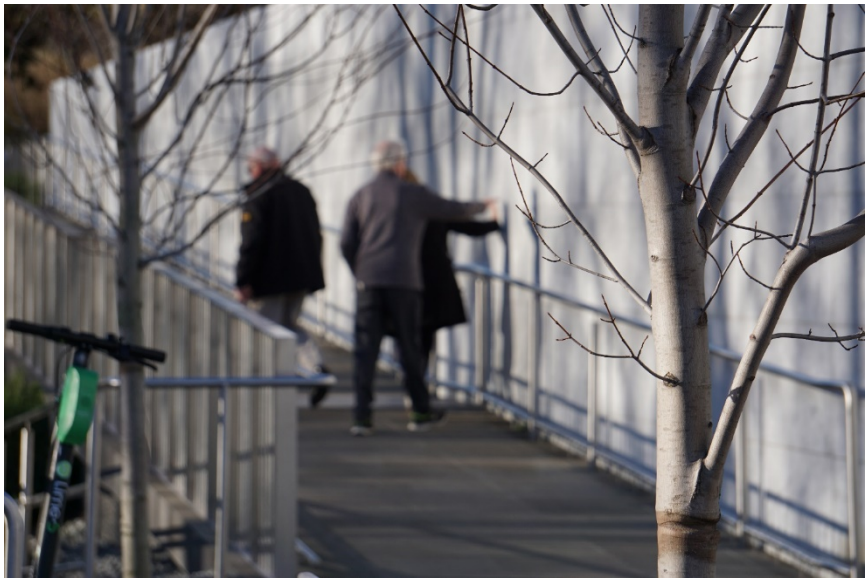


Figure 5.92. Reading and touching the names at Oi Manawa. Photo by Louise Bailey, 2019

Figure 5.93. The same stones as in Figure 169 are rearranged over time. Photo by Louise Bailey, April 2020

5.5 Emotions

Death triggers a range of emotions from those who are left behind and normally in society grief is shown in a more private space than public, such as at a funeral, family gathering or at home. Memorials are a public space where anyone may enter to remember a tragedy or for recreational purposes. Expressions of grief are appropriate at memorials and with multiple functions other emotions may be accessed. Memorials may be designed with private spatial opportunities where the mourner feels comfortable releasing emotion. The emotions found at case sites through observation of visitors in their actions, facial expressions, gestures, voice, through media relating other's feelings, and also through my own emotional response at memorial sites are discussed in this section. Melancholy, sorrow, reverence, playfulness, anxiety and anger listed in Table 3, page 102 are the emotions examined as they are pertinent to emotions felt at memorial sites of natural disaster.

5.5.1 Melancholy

Included in the typical melancholic landscapes Bowring places memorials and ruins, and yet she takes the discussion further into a lesser explored realm of 'evocative qualities and conditions', … "which are brought forward, exhibited, offered." [315] Bowring considers that "landscape provides the ideal setting for melancholising," and can exhibit the quality of "elegiac beauty."[316] In a commemorative sense there may be an 'elegiac tonality'[317] as well as a 'locus of slowness, countering the seeming urgency and relentlessness of the contemporary condition."[318] This requires the visitor to a memorial to slow down and contemplate the fragile nature of their own mortality.

5.5.2 Sorrow, Reverence

Nine case sites in Table 3 allow melancholy and sorrow to be found and experienced. There is sorrow in looking at ruins and remnants of tragedy and destruction and that sorrow in all cases is aligned with melancholy. Okawa Elementary School is a sombre memorial still exhibiting signs of the destruction in the buildings but also the reminders, the small animal toys on posts, the hanging toys that sway in the breeze as shown in Figure 5.94, the painted mural wall of children holding hands, that this was a place where children once played and were happy. Visitors are quiet and move slowly around the grounds many stopping at the shrines to pray, (Figure 5.95). There is no running or laughter or people having a picnic which would be easy to do in the rural landscape of grass and hills.

---

[315] (Bowring, 2017) p.55
[316] (Bowring, 2017) p.55
[317] Elegiac tonality is John Dixon Hunt's phrase for a reference and reverence to the elegy and commemoration (a loved absence). See Wolschke-Dumabrton Oaks 2001," *Come into the garden, Maud": Garden Art as a Privileged Mode of Commemoration and Identity.*
[318] (Bowring, 2017) p.55

Figure 5.94. Reminders of children on a shrine at Okawa Elementary School memorial. Photo by Louise Bailey, 2019

Figure 5.95. A visitor bows and prays in front of a shrine at Okawa Elementary School. Photo by Louise Bailey, 2019

A difference can be observed at Cosmic Elements between the atmosphere of the inside and that of the outside. Inside in the chamber, a more private space, the visitor is enclosed in a quiet space removed from any outside world distractions, surrounded by panels of the names of the dead and any thoughts of joy or playfulness would be difficult to conjure. My own experience was that of a stranger visiting a grave of someone I had not known which left me with a feeling of invading a

sanctified space in which I did not belong. This was not akin to voyeurism as there were no personal or morbidly graphic elements on display. Had the guide not taken me into the chamber I may not have ventured into it by myself, similar to walking into a dwelling without invitation. The space is closed, intimate, calm and private with an elegiac quality.

The outside of Cosmic Elements offered a more everyday landscape with open space, trees and invitations to sit on the terraces. While it is a corner of Higashi Yuenchi Park dedicated to commemoration it provides a quiet contemplative space removed from the surrounding busy, urban streets. The mood is lighter than inside the chamber and people use the space with passive recreational activities such as walking a dog, reading, or cooling a hand in the waterfall on a hot day. It is not quite a playful space as the cues to a tragedy are visible via the Light of Hope and the structure of the chamber.

The Port of Kobe Memorial, being situated in a public park with many other recreational activities taking place, as a ruin emanates melancholy. There is a sadness and fascination with the morbid to see a relic of a previous society lying subject to the ravages of nature and time, and yet there is a sublime beauty in its decay. As a tourist attraction in a highly public exposed place it is not personal, there are no names of victims, no reference to suffering, just a remnant of a street that is now reconstructed. Another prominently placed remnant memorial, the Miracle Pine, carries sorrow as a reminder of the fragility of life but also a sense of joy and possibly playfulness as an object of fascination highly revered by the local people and tourists. It is a symbol of hope and while it tells a tragic story it also tells of survival and a hopeful future.

5.5.3 Anxiety, Playfulness

A sense of security and survival from potential natural disasters are provided in the protective structures such as the seawalls, safe stations and reconstructed roads, but at the same time these visible reminders in the landscape of a preparedness for future catastrophic events may also provoke anxiety. The guide in Rikuzentakata explained that there are mixed feelings in the community about the safety of the re-built town and the slow regeneration of a declining population. Many survivors left their homes and livelihoods and relocated inland, and the younger generation are migrating to the bigger cities. Anxiety as indicated in Table 3 is often coupled with other emotions that might confront or conflict with anxiety, for example a playfulness that is found at both The Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution and Hokudan Earthquake Memorial Park. Both of these memorials focus on education and yet there are elements that are more light hearted with a sense of playfulness as demonstrated by the simulator at the former where the force of a tsunami can be experienced and at the latter the

strength of the earthquake is simulated in a model house. For some there may be an unnerving anxiety and others may experience it as fun similar to a Disneyesque fun fair. Quake City in Christchurch includes similar interactive installations such as the sand box that shakes and displaces the sand simulating liquefaction in an earthquake. Playfulness comes in a different form at Oi Manawa in Christchurch where there are places for recreational activities like picnics, playing on the steps and handrails, feeding the ducks in the river, and riding a scooter down the ramp. The open public space provides for a range of emotions listed on the table.

5.5.4 Anger

There was only one site where anger was observed. Although it was not one of the cases studied in detail, as shown in Table 3, it is still an important example of emotion. While the display of anger witnessed at the site was obvious, it is also possible that others feel anger but do not manifest it overtly. The sub-titled video being played at Nobiru Station information centre told of a woman who now travels through Japan relating the story of the tsunami and spoke of graphic injuries received by the bodies caught and tossed in the tsunami waves. An elderly gentleman was standing nearby as the video played and as the woman recounted her story the gentleman spoke in an angry tone with tears in his eyes and he and my husband embraced, a commonly understood gesture that transcends culture when neither spoke each other's language. The guide explained that the gentleman's wife died in the tsunami and he was upset at the telling of a personal story and the mutilations of bodies that was still painful for him. He believed that she should not be repeating the tragic nature of the disaster and more respect should be given for the victims and their families.

5.6 Conclusion

This chapter set out to evaluate the messages that each case site conveys, following the typological headings in Table 3. Emphasis is placed on Education as it emerged as an important lesson. While culture is mentioned throughout, and the cultural differences between the two countries is relevant limitations of the study for a one-year masters did not allow time to examine culture in depth. Priority is given to design expression. The next chapter discusses the differences and similarities in the memorials that are examined in every chapter including those resulting from a human induced tragedy, with a focus on the differences between Japan and New Zealand

Chapter 6

Discussion

Research on case study sites in New Zealand and Japan contributes to our understanding of the potential roles of memorials to natural disasters. The memorials in the two countries reflect not only cultural differences but reveal different positions on what memorials can contribute in relation to natural disasters, from mourning to preparedness. The following discussion draws together these differences and the ways in which memorials to natural disaster can play different roles, including in Japan, a key role in education and preparedness training. The discussion responds to the initial question asked:

Why memorials matter. What are the differences between Japan and New Zealand in how each country memorialises natural disasters? How can memorials perform other roles than simply remembering?

6.1 Natural versus human conflict

Memorials to natural disasters and those to human conflict share many similarities and differences in terms of their approach to memorialising, spatial qualities, interpretation and the way in which they support emotional responses to tragedy. My research an initial investigation into exploring the differences, found that amongst the cases studied, they tend to exhibit more similarities than differences. For both types of memorial there is a subtext about "not forgetting," but for human-induced tragedies nations can take decisive action to ensure this kind of disaster is avoided in future. In the case of natural disasters, there is some onus placed on governments to ensure the legacy of the trauma and the message of the memorial is recognised in measures to mitigate loss, such as strengthened infrastructure. There is also a particular message at the level of the individual, to be prepared and prevent the loss of life and damage to property. In the case of a natural disaster it cannot be avoided and is certain in many countries to reoccur periodically. While governments may take protective measures to mitigate loss through strengthening of infrastructure, and provision of evacuation space and resources, there is a requirement placed on the individual to be prepared and prevent loss of life and damage to property.

Of the memorial case sites, many provide evidence of future proofing and preparedness with the broader view taken by Bowring and Swaffield that changes in the landscape, changes in legislation,

infrastructure and objects of art all contribute to a memory of a time and occurrence of an event.[319] Whether a natural or human-made disaster, the resulting changes in the landscape are not always discernible by the resulting memorials however, they all serve as a reminder of a time and event. Examples of memorials to human conflict are discussed in the literature review through those that are written about extensively and formed the basis of comparison to the memorials in this study. I identified four ways in which memorials to natural disasters and human-induced tragedies are similar and different: co-location of the memorial and an associated museum; the level and type of information provided; the spatial relationships; the focus that is given in each country to natural disaster preparedness;

6.1.1 *Co-location of memorials and museums*

Memorials to human conflict traditionally provided a space for commemoration and remembrance, but a change in recent times sees the emergence of museums providing background information of the tragedy, placed in the same locality as the memorial. The merits of the emerging hybrid memorial and museum is debated as Eisenman, architect of the Memorial to the Murdered Jews of Europe attests, but a counter view is that there are benefits in providing additional knowledge for the visitor with their limited if any knowledge of the tragedy.

The Memorial to the Murdered Jews of Europe was initially to be built without a museum, and Eisenman was an advocate for the memorial to stand alone.[320] Proponents for the museum wanted future generations to gain knowledge of the Holocaust, and to tell the full story of the tragedy including more personal photographs and messages from those who suffered, and the names of the victims played audibly, never to be forgotten. The museum was built underneath the abstract Field of Stelae memorial mimicking the form of the stelae as they penetrate below ground into the ceiling and reflecting patterns on the floor of the museum. Similarly, the National September 11 Memorial has a museum below ground immediately underneath the memorial and the Shrine of Remembrance in Melbourne had a museum space built retrospectively in 2003. These memorials and their associated museums are linked physically and spatially with one below the other. The Thiepval site museum in France was built retrospectively one hundred years after the battle of the Somme and is sited a short walk from the memorial so that both may be visited on the same day without the need for transport between the two.

[319] (Bowring & Swaffield, 2013) p.96-104
[320] (Kanopy, 2014)

While the examples above are memorials to human-induced tragedies, case sites of memorials to physical disasters in Japan indicated a similar pattern of co-location. The memorials to the earlier 1995 Kobe Earthquake, Cosmic Elements (refer to Chapter 4.2.1, page 68), and the Port of Kobe Memorial (refer to Chapter 4.2.2, page 72), are not sited with a museum or education centre nearby. Although the Port of Kobe Memorial displays adjacent panels with information on the reconstruction of the port it is not classed as a memorial museum. The education centre in Kobe, the Disaster Reduction Institution (refer to Chapter 4.2.4, page 80), is a considerable distance from Cosmic Elements where the names of the victims are placed in the chamber below ground, and remembrance ceremonies are held. Conversely the Hokudan Earthquake Memorial Park and Museum (refer to Chapter 4.2.3, page 76), on Awaji Island is built over the fault that ruptured in the earthquake. The pyramidal memorial sculpture is located alongside the museum and is visited by the community for a remembrance services on the anniversary of the earthquake. Museums developed in response to the more recent 2011 Tohuku earthquake tsunami are located close to the place where tragic events occurred or where a memorial structure is erected. This co-location brings together the place of mourning, the place for prayers to be offered in remembrance at a sacred place or shrine at the same time as gaining education of the event. The Miracle Pine in Rikuzentakata (refer to Chapter 4.3.2, page 84), appears as a strategic direction in planning, taking advantage of the fame of the tree to build a network of facilities. A museum and park were built, enclosing the preserved tree in a landscape of infrastructure which comprises the seawall and levee of park and lakes. This museum and memorial are openly designed with the tourism market in mind to assist in regenerating a town that suffered loss of life and economic downturn.

Dark Tourism and Thanatourism are contrasting ways in which tourism navigates sites of tragedy. While Dark Tourism draws on the spectacle of the event rather than a depth of understanding, Thanatourism includes a responsibility to inform the visitor and bring about empathy for the victims and survivors through a "shared or universal heritage."[321] Okawa Elementary School (refer to Chapter 4.3.4, page 88), exemplifies Dark Tourism as there is little to inform visitors of the tragedy or the history of tsunami in Japan and measures that can be taken to prepare for future disasters. It is a memorial that portrays the plight of children and their teachers at the mercy of nature. Memorials like this challenge our very existence and raise thoughts of our own inevitability of death. Young and Stone would concur that the memory of a tragic event does not need to be known to the visitor, and that by witnessing the loss of others vicariously, and participating in a ritual "remembering together becomes an event in itself that is to be shared and remembered."[322] Stone writes, that the

[321] (Stone et al., 2018) p.610
[322] (James E Young, 1993) p.7

confrontation of death through the "acceptable gaze" a sensitisation and sanitation of death occurs where the visitor unconsciously is moved towards a distancing from the tragic death of those who are memorialised, and a hope that their own death will be a 'good' death.[323] There is no escape from viewing the horrific nature of the tragedy at Okawa School. Although the grounds were cleared of debris, the remains are left in a raw state with buildings open to the elements. Unlike the Port of Kobe Memorial where the ruin is arranged with a surrounding walkway and there are no signs of death, no relics or leavings to hint at past lives that were cut short, Okawa Elementary School exhibits pain with little explanation. It is not the graphic pain of others as referred to by Sontag. It is a melancholic feeling that permeates the school grounds. At the same time Disaster Tourism offers the opportunity to give the mixed signals referred to by Sontag, "Stop this it urges. It also exclaims, What a spectacle!"[324] Having endured a period of 25 years of "ruin time," in contrast, the pain of the destruction at the port in Kobe has faded and taken on a form of beauty.[325] It could be argued that if Okawa Elementary School included a museum to educate visitors it would carry less of the 'spectacle' and follow the concept of Thanatourism which according to Roberts, offers deeper levels of engagement and openness to the learning processes. Without the learning opportunities these sites are open to "criticism within moral contexts," Roberts argues.[326]

An example of a retained school building that co-locates a memorial and a museum is the Arahama Elementary School. While not formally known as a museum the provision of educational and informational interpretation fulfils a similar role. In a state of less destruction than Okawa Elementary School the building, once debris was removed, remained intact and tells the story of survival rather than death. Venturing into classrooms on different levels and to the rooftop where students and teachers waited for rescue is an inspiring lesson in fortitude and caring for community to get through the cold, scary night without loved ones. There is also a lesson in being well prepared through the revision of the evacuation plan. The gymnasium the original evacuation site was destroyed in the tsunami.

Reconstruction is ongoing in the Tōhoku region in Japan with many parks, memorials and museums still to be completed. Concept plans and documents of the proposals indicate the scale of recovery in the landscape now restricted for future urban development. The Tsunami Recovery Memorial Park in Ishinomaki is one of many memorials in the Ishinomaki region and was due for completion to receive the Olympic flame in 2020. Within 16kms of the Ishinomaki Community & Info Center in the

[323] (Sharpley & Stone, 2009) p.33, 34
[324] (Sontag, 2003) p.77
[325] (Bowring, 2013) p.85
[326] (Stone et al., 2018) p.610

centre of Ishinomaki City, there are five memorials to the 3.11 disaster with the memorial park being the largest scale and Okawa Elementary School being the furthest away. There are more if protective measures such as the Old Kitakami River embankment is included as a memorial, as well as the small parks and retention areas throughout the city, and evacuation buildings. At the time of visiting Ishinomaki there was no information available that gave directions or provided a map of the locations of the memorials and Ishi-no-kinendo was not known by the information centres in the central city, rendering it challenging to locate. Within each locality of Ishinomaki there is a memorial for the people of that area to visit for remembrance or recreation such as Ishi-no-kinendo, Okawa Elementary School, the tree walkway, river promenade and the Tsunami Recovery Memorial Park. For a population of 147,000 the evidence reveals a strong call to remember and to protect. The Densho Road Project may provide comprehensive information of the recovery, connecting the resources and memorial sites stretched out through the Tōhoku region, and fulfil the key objectives of disaster prevention education, while enhancing tourism.[327]

While the cases studied in Japan exhibited a range of connections between memorials and information facilities, in Christchurch the relationships are very different. A larger population than Ishinomaki, and fewer deaths resulted in four memorials evolving in Christchurch, New Zealand. These comprise a major national earthquake memorial at Oi Manawa, Quake City, an artist's spontaneous installation in the 185 Empty White Chairs, and a temporary memorial at the site of the Canterbury Television building where a greater number of the 185 deaths occurred. Clustered in the central city they are within walking distance of each other but there is no overall strategy to link them, and no information provided for tourists to locate them. Quake City is the only place where details of the event can be found, and that is visited mostly by tourists. The facility does not cater for education of the Canterbury population or others within New Zealand who may be affected by the AF8 earthquake, the magnitude 8 earthquake which is overdue on the South Island's Alpine Fault.

Oi Manawa, the official memorial for annual commemorative gatherings, is visited or passed through by the community in their daily lives without any reminders of impending future disasters or education about how to be prepared. Functionality of the space is not dissimilar to that of Eisenman's Memorial to the Murdered Jews of Europe in that the space is not prescriptive and there is a freedom of movement and activity. There is no symbolism that was prominent in traditional monuments allowing an open agenda for the visitor to interpret the space following their own emotions and thoughts. It is a memorial that spatially meets the definition of Stevens in reference to

[327] (World Bosai forum/IDRC 2019 in Sendai, 2019)

the Memorial to the Murdered Jews of Europe, of a contemporary field memorial, "scaled to the human body, … to form part of a complex landscape which visitors move over, into and through."[328]

Placing the memorial in a powerful context according to Young, links place to memory in a cognitive order that allows ease of navigation in a cohesive location that, "maximises the opportunity for symbolic meaning."[329] The powerful context is part of the discussion of co-location of memorial and museum. An example of a powerful context in Japan is the museum in Rikuzentakata, the Miracle Pine and levees of lakes and pine trees to the backdrop of the protective seawall on the coast and the raised new town in the protected inner valley. It is a spectacle not of destruction and terror, but of a resilient community that worked together to rebuild a town integrated into a transformed landscape. When completed the Ishinomaki Minamihama Tsunami Recovery Park may also offer a cohesive location with the same integration of reconstructed landscape and community facilities for commemoration and recreation as well as educative information for visitors.

When a natural disaster occurs in an urban environment, buildings are very often rendered unsafe and uninhabitable, streets and infrastructure are similarly often damaged beyond repair and areas of land deemed unsuitable for future habitation. Space comes available and memorials can be integrated into future planning without the restriction of an already established urban environment. Many examples were found in Japan along the coastline where large tracts of land are now developed as protective infrastructure such as the seawalls and levees where museums and memorials are being established. The co-location of memorials and museums varied in Japan, although a recent trend in a 'leisure-education hybrid'[330] is emerging, and with many memorial spaces not yet completed a greater number would be expected in the near future. The combination works as a central place for tourism, education and remembrance.

6.1.2 Level and type of information at memorials

My research explores the type and amount, or lack of information conveyed at memorials to natural disasters and human conflict. Jay warns of the temptation of the world of entertainment, which could include memorials and associated museums, to lose the connection to reality, and in the case of a natural disaster, an empathy for the pain of others with a greater depth of understanding.

> only if aesthetic spectatorship declines the invitation to conflate itself entirely with the entertainment industry's cinema of attraction can it provide a possible alternative mode of relating to a world that threatens to

[328] (Stevens, 2009) p.159
[329] (James E Young, 1993) p.8
[330] (Stone et al., 2018) p.613

> dissolve the distinction between reality and simulacra entirely and make every experience vicarious, derivative, and ultimately hollow.[331]

Many of the museums and memorials in the study verge on the spectacular with simulations of disasters shown and described graphically to visitors including young children. The inclusion of educative material could allow for a clearer distinction between reality and simulacra, and the experience although vicarious could be complete and meaningful, and as Jay writes of disasters, "the ones in the future [that] might perhaps be forestalled."[332]The spectator visiting a place of remembrance although experiencing the trauma vicariously has the capacity to observe and understand the need to avoid future tragedies.

In the case sites in Rwanda and Cambodia, Davis and Bowring observed that there was a deliberate attempt to educate at memorial sites with facts, figures and narrative with the aim in Rwanda to "squash any remnants of genocide ideology."[333] A "thoughtful philosophy of sightseeing," is how Roberts describes Thanatourism and she believes that there is a responsibility to learning and interpretation at such sites.[334] While ideology is not relevant to the tragedy of natural disasters the attempt to inform and prevent or mitigate future tragedy is evident in Japan in the level of education that is available for the tourist and the Japanese people. While not all sites visited in Japan provided translation in English and other languages, many were in in temporary buildings awaiting the completion of the final memorial museum. Internet searches near the completion of this thesis reveals that many now provide translated information. In conversation the guide at Quake City said that translation is being considered for tourist of different nationalities.

High numbers, approximately 476,000, of national visitors indicated in the 2018 records at the Disaster Reduction Institution in Kobe, suggest that after sixteen years of operation it is still a valued place for education of natural disasters for the Japanese people. It appears balanced between presenting the history of the 1995 earthquake, cultural and community initiatives to revive the spirit of those living in the damaged city, and the educational classroom activities and lectures. The message of "never forgetting the earthquake" displayed on the information panels, photographs of the aftermath and the dioramas not only illustrates the destruction but offers hope for a normalised everyday life. A balanced presentation of information and education in The Disaster Reduction Institution offering a "deeper level of engagement and openness to learning processes," may well

[331] (Jay, 2003) p.117
[332] (Jay, 2003) p.117
[333] (Davis & Bowring, 2011) p.385
[334] (Stone et al., 2018) p.609

meet the expectations of scholars who call for a more "thoughtful philosophy of sightseeing." [335] It is the accessing of what it is to be human that enables the "stranger"[336] to a memorial to empathise with those who lost.

The museum at The Hokudan Earthquake Memorial Museum approaches the display of information differently from the Disaster Reduction Institution. As the two memorials are only one hours travel apart, they complement each other rather than replicate the same information. The retained remnant of the fault makes the Hokudan Earthquake Memorial Museum distinctly different, and as a natural museum it tells the story of the geology of earthquakes with an actual example of the rupture. Visitors may imagine how their own house might respond with the same distortion of the ground. The retained house also demonstrates the reality of how a home might be affected by the jolts with furniture and cutlery strewn about. Visitors are asked whether items in their homes are secured; a practical lesson, and one which is accompanied by strong visual consequences from lack of preparedness. The simulator of the earthquake, experienced by sitting in a model house, is in an open space in full light with a museum guide in attendance, and would be defined as the darker shade of dark on the spectrum of light to dark, rather than a "dark fun factory,"[337] that shows the macabre for sensational tourism purposes. These exhibits a sense of the spectacular but stop short of reaching the extreme and macabre. Stone may argue that empathy could be shown by visitors as they grapple with their own vulnerability to pain although, in this case it is inflicted by nature, and possibly the unpreparedness of humans for catastrophic events.

A less orchestrated museum memorial is the Arahama Elementary School which retains a damaged building with a specific narrative of survival. There are no official guides but translated pamphlets at the entrance provide a coded reference to understand what is displayed. The informal messages on the classroom blackboards and the panels of post-it-notes is more personal. Messages written by the survivors and visitors enter a distant dialogue between the two of endurance, understanding, empathy, and hope. In accepting their own vulnerability in the face of future tragedy it is human to be encouraged by the kindness and support of others. Information at the site, including the video shown to all ages, was disturbing in comparison with information that is shown in similar exhibitions in the New Zealand case sites. While some may be fascinated by the dioramas of the village as it was, the view from the roof top reveals a landscape changed from urban to rural in one day. A

[335] (Stone et al., 2018) p.610
[336] (Franses, 2001) p.97
[337] (Sharpley & Stone, 2009) p.169

feeling of relief for the survivors cannot be ignored but the tragedy of homes destroyed and lives within the community lost is evident in the post-it-notes of smiley and sad faces.

With even less information displayed and no translation available the Okawa Elementary School is at risk of being a "spectacle." Remodelling the damaged building into a highly structured museum with digitised displays and interactive devices and simulators would border on the macabre. At a site where so many lives were cut short, and the terror of the children being engulfed by the wave is visible without any further orchestration, minimal information seems all that is required. There is a rawness in the remnant that in time may become a ruin and take on the patina of "ruin time,"[338] with a beauty and "memory decay," reflecting the "conflicting social desires to remember and to forget."[339] Young supports this view, and believes that not to allow the fading of memory would "disable life."[340] For the families of the victims who may still live near the school, the building is a painful reminder in their everyday landscape.

Blank spaces on the panels of the walls in the chamber at Cosmic Elements is a symbol of the pain of others unable to see the names of their loved ones, many of whom were children. It may be that in placing the names out of the everyday gaze below ground is a consideration of that pain similar to the names of victims placed in a stone chamber at the Memorial Monument for Hiroshima. Perhaps in a similar way, through the passing of time as the pain fades, names may be added at Cosmic Elements.

Entry fees at museums vary from being free to charging a considerable fee. It is difficult to draw conclusions about the correlation of fees charged and the target audience, but the literature suggests that the purpose of a fee is relevant.[341] Whereas the museum at the Memorial to the Murdered Jews of Europe with free entry the museum at the National September 11 Memorial requires a considerable entry fee. The two larger museum case sites in Japan, The Disaster Reduction Institution in Kobe and the Hokudan Earthquake Memorial Museum on Awaji Island ask a small entry fee and in the case of the former it is free for school students. Quake City in Christchurch charges a small fee for school children but a greater entry for adults who, in this case, are predominantly tourists. Questions may be raised from these findings on entry fees, whether the funds are used as Sharpley and Stone suggest, for good purpose, that is for the upkeep and maintenance of the facility, and whether the local community supports the museum.[342] As the

[338] (Bowring & Swaffield, 2013)
[339] (Karen E. Till, 2005) p.9
[340] (James E Young, 2016) Loc.392
[341] (Sharpley & Stone, 2009) p.87, 88
[342] (Sharpley & Stone, 2009) p.87

United States and Berlin museums present a differing approach to fees there is no clear difference that could be extrapolated between fees charged at museums of human conflict to those of natural disaster except that in the case of the National September 11 Memorial the fees are considerably higher than any others in the study. This may suggest a moral conflict of commodification of a tragic site.[343] It may also suggest a focus on tourism rather than education. Quake City reinforces this aspect by being largely visited by tourists, with concessions made for school groups. Japan stands separately as an example of low fee, if any, suggesting less of a focus on commodification.

6.1.3 Differences between New Zealand and Japan

Within the study the aim was to compare differences between New Zealand and Japan and how each memorialises recent natural disasters. As the study examined spatial qualities, messages, and emotions these will be briefly discussed, but the key factors that emerged is a difference in the level of preparedness for future events and the approach to education.

In examining the differences between the two countries similarities were found that made the differences more pronounced. The two most similar memorials in spatial qualities are Cosmic Elements in Kobe and Oi Manawa in Christchurch. Initially it might be considered that they are different however, on examination the spatial qualities offered display commonalities. One is partially below ground with blurred boundaries of inside and outside, the other is below ground level yet open, also with blurred boundaries. The chamber of Cosmic Elements is a small, intimate, confined space with a gradual declining slope entrance at one end and steps at the other. The outer space is tiered, layered, revealing a topography of nature with mountains, valleys, and waterfall framed by trees. Each element while having specific symbolic meaning contributes to a place that transcends its cultural context and could be understood as a place of remembrance in any culture. Oi Manawa employs similar elements of a defined space that opens to the expanded landscape of river, grass and trees to the north. A tiered effect from the upper road to the wall below, and further steps to the river are additional elements. At one end of the marble wall steps descend, and the other is a gradually sloped. In spatial qualities, and elements, the two memorials are similar, but their cultural context although meaningful in their separate cultures is different. Symbolism reflected in the naming of “Cosmic Elements,” and the design is given careful thought within a philosophical frame that is understood by the Japanese, Chinese and Indian cultures, as well as Buddhist followers throughout the world. For the people of Japan, the narrative of disaster in Kobe is passed through the presence of the memorial in Higashi Yuenchi Park, the spectacular annual remembrance

[343] (Sharpley & Stone, 2009) p.87

Luminarie display, the Port of Kobe ruin, and the stories passed from one generation to the next at the Disaster Reduction Institution.

Oi Manawa exhibits elements of water, trees and void and embraces a type of consciousness like that in Buddhist philosophy through a contemplative space. The natural elements already present are integrated into the design of the memorial and hold historical and cultural value that is specific to the people of the place. The names of the victims on the wall at Oi Manawa and the many cultures represented in both their cultural script and English is a symbol of a multi-cultural society.

Rico Franses questions the role or purpose of a memorial that displays the names of the victims and whether that is sufficient to engender a connection with the stranger visitor who is unaware of the people and possibly the tragedy that occurred. In discussion of the AIDS quilt he points out that the quilt, while naming the person, also introduces the deceased in an intimate way revealing something of that person and their life. In doing this the viewer to whom the dead person is unknown comits "a larger slice of the ego to match it, producing an even greater melancholia."[344] This Franses believes is the "social role of the memorial," and "through the memorial, melancholia comes to function as an agent of social binding."[345] Few of the memorials in Japan that evolved since the 2011 earthquake tsunami listed the names of the victims, and although the number of deaths was great, that is no restriction to how and where the names are placed, as observed with Theipval and Hiroshima memorials. It is also not indicative of a cultural difference as Cosmic Elements and the memorial at Nobiru Station display names of victims in the same way of Oi Manawa in Christchurch. It is the personal elements that reveal that person as less of a stranger. Flowers and painted stones placed below the names at Oi Manawa extend the knowledge of that person and produces a greater melancholia. Toys placed on posts at Okawa Elementary School reveal the age and playful side of a child amplifying the site's melancholy qualities.

The range of commemorative opportunities allows different emotional responses. From the melancholic chamber at Cosmic Elements to the much-enjoyed lighting display of Luminarie there are solemn occasions and playful experiences. Ten-year anniversary commemorations of the Canterbury earthquakes will be held in September 2020 and February 2021, and the Tōhoku earthquake and tsunami 10-year anniversary will be held in 2021. With the passing of time they may not render such raw emotions and the rituals may touch on the lighter side such as Luminarie. It is the combination of memorials in Japan that offer this range of emotions, including anxiety in the uncertainties of future events, that is unique. Emotions and messages are connected. Fears and

[344] (Franses, 2001) p.102
[345] (Bowring, 2017) p.8

anxieties may be allayed, grief may be released and thought composed in a memorial space that may also be enjoyed with fun and playfulness. A playfulness that was witnessed at the Memorial to the Murdered Jews of Europe, Cosmic Elements and Oi Manawa. It is not simply the role of one memorial to allow for the range of emotions and messages. Till states that, "*Places of memory* are *created by individuals and social groups to give a shape to felt absences, fears, and desires that haunt contemporary society."*[346] A sanctified memorial while bringing some comfort may not address the fears and it is this important aspect that is prominent in Japan.

It is incumbent for a government to act for the protection of its population whether from war, natural disasters or disease currently being witnessed by the spread and response to Covid-19 around the world. While some measures were taken in New Zealand to improve building codes, re-zoning land as unsuitable for future urban development or reconstructing roading such as State Highway 1 with improved resilience, there is an apparent gap in the education and preparedness for future natural disasters.

It is predicted that the next major earthquake in New Zealand will leave much of South Island without power and water for potentially weeks. With little assistance being offered from the governing bodies, the comparison of New Zealand to preparedness in Japan is under activated. The information evening held at the Lincoln Event Centre in Canterbury provided minimal information. Evacuation locations had not been identified, emergency water supply was not guaranteed, and people would need to manage without power as there was no alternative plan. The recent initiative in New Zealand "Get Ready" appears to be taking preparedness more seriously and is utilising international material and strategies such as the international ShakeOut drill day. How much it will be integrated into schools is unknown, and it may take time to gain momentum. There are no official sites of emergency education for the general public or school students, the future generation who are most likely to experience AF8.

6.1.4 What can be learned

It appears that the New Zealand Government is gaining awareness of the need to be prepared for the next natural disaster and is making some attempt to convey that message to the public. There is still much that New Zealand could learn from Japan in integrating education of natural disasters into the daily lives of the people, and particularly the younger generation through the school curriculum. To do this would be a memorial to the natural disasters that occurred in New Zealand and a sign of commitment to preventing further tragedy. Learning about how to respond in an emergency is not

[346] (Karen E. Till, 2005) p.9

compulsory in Japan or New Zealand, but in Japan government documents show that a high importance is placed on education of preparedness in schools and the community. Working groups in communities are encouraged and are actively engaged in workshops and initiatives of preparedness. The many natural disaster museums with business and school groups visiting indicates the level of gravity given to this education.

In Sendai alone the list of evacuation centres in each locality is extensive, and provisions such as blankets, torches and food are available at each. Gauging from the Civil Defence meeting held in the Lincoln Event Centre, evacuation centres are not determined and there is no provision of emergency resources. Local schools and community parks in New Zealand could be equipped with these facilities. Community engagement in the establishment of initiatives and education would prepare the community with the knowledge of exactly what help is available and what they themselves need to do. The scale of the earthquakes and tsunamis in Japan take a greater toll on life than those experienced in New Zealand during human occupation of the land, but the warning is that the Alpine Fault rupture will cause far reaching devastation greater than previous national earthquakes.

The education centres in Japan are confrontational about the realities of information displayed in dioramas, videos, photographs and narratives of the survivors, and the new generation of storytellers. The level of graphic information portrayed to children in Japan would be considered inappropriate in New Zealand where a much softer approach is taken.

There is an argument for the leisure-education-hybrid that is being adopted in other countries and strongly followed in Japan. Visibility in the everyday landscape and ease of access are key factors in the memorial education centres in Japan. Other visible reminders in the landscape of Japan are the high sea walls and evacuation towers. They hold a duality of remembering and forgetting, and protection and fear. While memorials of commemoration perform functions of remembrance and not forgetting the infrastructural memorials provide reassurance for some, but they are also a reminder of the fear of imminent disaster.

6.2 Conclusion

The discussion highlights the importance of education and the hybrid memorial-museum and what Japan offers New Zealand with their long history in managing natural disasters. New Zealand is showing commitment to developing systems for preparedness and is compassionate to those who have suffered through tragedy. The next chapter discusses the future and scope for further research on memorials of natural disaster.

Chapter 7

Conclusion

In remembering and not forgetting, in commemoration, the memorial "will find an outlet at all costs,"[347] and this is evidenced by the many memorials throughout the world. The memorial to a natural disaster does not stand as a unifying national identity like traditional memorials to human conflict but unifies people in a common space where meaning and emotions are varied and hope for a better future is promised. Memorials act in the "social binding"[348] referred to by Franses, and the need of humans to forget to be able to continue living in this world and at the same time to remember. Remember those who died, remember the suffering of their loved ones and the loss and pain of others, and to remember what needs to take place to avoid future pain and suffering. In the words of Simon Schama, "The sum of our pasts, generation laid over generation, like the slow mold of the seasons, forms the compost of our future. We live off it."[349]

Landscape architecture is poised to engage in memorialising natural disasters from an understanding of natural processes of the land and how people interact with places and space. This study highlights not only the importance of memorials to aide in healing wounds, but the value of memorial places in the face of our own inevitable death, engendering empathy in the visitor and preparedness for future natural disasters.

7.1 New knowledge

Since ancient times Japan recorded tragedy by tsunami, earthquakes, and fire, but lessons learned from the past often faded through the generations. Forces of nature overthrew warnings and precautionary measures to devastate yet again. New Zealand is experiencing these ravages of nature and will inevitably face more catastrophic events in the future. The need to learn from other experiences is paramount and urgent. Memorials come into being after a tragedy occurs and provide a place to remember lives lost, the trauma and pain suffered. Many countries lie on the Pacific Ocean Ring of Fire, an area at constant risk of natural disasters, triggered by tectonic plate movement and form the breadth of places to research memorials to natural disasters. Japan, with a long history of natural disaster and memorialisation was selected as the country for study and comparison with New Zealand. Different from human conflict, natural disasters can be forecast

[347] (Forty, 2015)
[348] (Franses, 2001) p.102
[349] (Schama, 1995) p.574

within a probability of timeframe. The luxury of having a sense of the likelihood of an earthquake allows for planning and education, and a proactive perspective that is achievable.

Japan now employs an army of defences in the form of structures to protect, memorials to never forget, and an enviable education programme for preparedness. The limitations of literature on natural disaster memorials brought about a reliance on scholarly literature, studying memorials dedicated to wars. This literature proved useful in the theoretical approach to memorials; their function in society; the need of communities to "not forget" and also to allow a level of the pain of suffering to subside into a "forgetting". The unexpected importance of education in Japan to prepare citizens for the undeniable next natural disaster emerged as a stronger focus as the thesis progressed.

There are differences in how each country responds through memorials that can improve the preparedness for future events, not only in the scale of infrastructure protection, but in the education of communities in knowing what to do in an emergency, who they can rely on for assistance, and where to evacuate in the short and longer term. Quite simply memorials do matter. The need for a place to remember, that provides a range of emotional responses, is not to be undervalued in the light of practical concerns. Valuing life and facing the inevitability of death is discussed in this thesis through the literature, and lessons to be learned from the results of warfare. There is no difference in this sense from the need to memorialise victims of human conflict and victims of natural disasters, but the difference lies in the opportunity to ensure the prevention of loss of life and property in a naturally recurring event.

The emergence of the hybrid memorial-museum, as a key factor in the study, gains more importance in light of the fact that lives could be saved. A protective shield is available. The ideal result of the hybrid memorial-museum in New Zealand, would not only meet the needs of commemoration for those affected and tourism (economy), but it would provide the assurance and protection from future events through education by siting both memorial and museum together. Information sessions such as Civil Defence community engagement, and school education in the science of natural disasters and preparedness, could be held at such a centre, similar to that found in Kobe at the Disaster Reduction Institution. Disaster-related research currently being carried out at Canterbury University, could be given a more public face by being sited with the hybrid. Memorials with a strong visual presence in a cohesive landscape that provides a level of authenticity of site, are key considerations in the literature and could be applied in Christchurch with an educative museum placed in close association with Oi Manawa. A subterranean access poses a challenge in a seismic zone with high water tables, but also a level of intrigue in engineering and design aesthetic that

could unearth its own narrative. Alternatives could be the remodelling of an adjacent building that suffered damage in the 2011 earthquakes or the repurposing of vacant land.

Research into natural disaster memorials in Japan and New Zealand, supported with broader research into memorials to human-induced tragedies, contributed new knowledge to the nature and potential of the memorial landscape. The Japanese examples that highlighted the value of an educative component of memorials expands the repertoire of what these sites can achieve. Complementing this, New Zealand's simple approach to creating a space for memory also contributes to the everyday enjoyment of the urban fabric.

7.2 Reflection on methods

Methods of research were mainly based on approaches to field work, and the gathering of information about the sites. A level of information was gained at Oi Manawa, Christchurch, prior to the case site visits in Japan. The case site of Oi Manawa in Christchurch, being accessible on a regular basis, allowed for field trials before travel. The early stages of research focused on analysing the site in terms of visitor movement, activities, and spatial qualities. However, the experience on site in Japan revealed different attributes of the memorials, and the need to adjust the analysis chart. Initially in Japan more attention was paid in the study to the same criteria that was monitored on the chart, but it became apparent that the magnitude of deaths and destruction in Japan brought about an acute awareness of the perils of natural disasters, and the focus of the study therefore reflects this.

The process of the study led a course of discovery that was revealing. To develop a rich set of cases, and offer the potential for making comparisons, research was carried out in both New Zealand and Japan. While language and culture presented some challenges in Japan, the comparative dimension, along with the number and type of memorials, and cultural differences, were all revealed through time spent immersed in the sites in both countries. The “first ignorance” referred to by Lassus[350] may not be escaped without the discovery of the place, the smells, the light, the people, food, landscape, cityscape, and space. Case sites form the foundation of the study.

The wealth of material that was discovered was too much to include in the thesis and needed to be narrowed to case sites that exhibited a point of difference. The chart, table 3, page 102, became a basis for analysis of categories in the study and required refinement as the different categories were analysed. Determining the most appropriate critique approach to relate an understanding and

[350] (Lassus, 1998) p.57

description of the site spatially, and the hidden more detailed qualities of site was crucial. Attoe's[351] interpretive and descriptive approach to critique gave direction that was non-judgemental in its analytical summation. Having practised as a landscape architect over many years, accumulating site analysis experience, provided a basis for site understanding. While atmosphere is a minor part in the thesis and time was limited for an in-depth discussion it is a consideration for future research that may highlight the importance of atmosphere at memorials and at commemorative ceremonies.

While the gap in the literature on natural disasters provided the core focus for my research, I drew on the wider memorial literature for understandings of how people use the places, how well the spaces respond to emotional needs at sites of tragedy, and the value of memorials as tools of societal change in bringing about empathy from tourists for the victims and survivors. My research methods aided in revealing more about the memorials. Memorials are key attractions in tourism, and a distinctive factor that evolved in the study, is the value of the hybrid memorial-museum. While it is important for tourists, who are strangers to the victims of disaster, to understand the plight of others, it is also, in the case of natural disasters, of utmost importance for future generations to be armed with knowledge of the volatile environment in which they live.

Many of the questions for future research may require a different method of study. Although language was a barrier in many situations in Japan the official guides were helpful in explaining information otherwise not detectable. Speaking to an official guide was a useful tool, and with a greater allocation of time, additional arrangements with guides, and meetings with government officials may allow a more in-depth knowledge of government process for establishing a memorial, funding, community engagement, and proposed projects. Again, the language barrier precluded engagement with visitors to the memorial sites, but further study may benefit from onsite interviews and guides who are able to assist in translation if required. A more thorough interview-based study would require human ethics approval, and this is something that would necessitate a longer time frame. The time allocated for the study in Japan was stretched to its maximum within budgetary, and time constraints that pressurised the time available at each site, the opportunity for a return visit to the site, and the opportunity to explore and find other memorials through the snowballing method. A longer time frame in Japan would allow for more depth and range to the study. Many memorials are in the process of being developed and only local communities are aware of them. Arriving in places amidst their reconstruction had its challenges with Google maps being

[351] (Attoe, 1978) p.49

obsolete and areas being inaccessible. However, this state of flux saw short term initiatives that were community based and driven by a passion and the need for places to commemorate.

7.3 Directions for research

Throughout the process of my research I became aware of many potential directions for future research. For example, it was noted in Japan that projects were generally funded through a collaboration of state and prefecture with contribution from the local community. Comparison of funding programmes between Japan and other nations with New Zealand may reveal strategies that New Zealand could benefit from including: the source of funding, staging of funding post disaster, prioritising of funding.

Evacuation centres in Japan are integrated into either community centres, many of which are recently built with that purpose accommodated or are retrofitted in retained buildings that are also museums and memorials, as well as in public parks. Spatial realities within neighbourhood schools and parks, documentation of strategies for evacuation and location of centres, and community engagement with evacuation procedures are areas that could be studied. New Zealand may gain valuable insight from further investigation of such strategies as both memorials and facilities for protection and recovery from disaster.

Research in Japan was focused on Kobe and the North East Coastline, but Tokyo, a densely populated city, is preparing for a magnitude 7 earthquake that is predicted to strike before 2050.[352] Tokyo authorities employ strategies for protection and preparedness in the form of buildings that can be converted to emergency centres, and disaster prevention parks that function as evacuation centres and emergency headquarters. In a highly urbanised city, the spaces provided for evacuation may be different from those in smaller less densely populated places. Further research in Japan may reveal spatial differences in density of populations in response to preparedness and education. Further questions that could be considered in the study of Japan might include: what are the future plans in Japan for memorials and museums, and is the hybrid memorial museum a well-regarded approach? How successful are the hybrids in educating for preparedness and empathy and do they serve the community for commemoration? These could be further explored and may reveal lessons for New Zealand's approach to memorialisation. Material on these matters is not exhausted and was still being unveiled as the study was reaching conclusion.

[352] (Hurst, 2019)

The thesis mentions a memorial in Banda Aceh, but many countries acknowledge natural disasters with memorials including China, a country that experienced devastating natural disasters, such as the 2008 Sichuan Province earthquake discussed on page 40. The subterranean, 5.12 Wenchuan Earthquake Memorial Museum is a sublime memorial in three parts; the Seismological Science Hall Experience, the Memorial Hall and the ruins. The design was revolutionary and interplayed a seismically fortified structure with a cutting though of the landscape. There would be much that could be discovered in spatial form, tourism, education, recovery, and future proofing from this site. To enable a full discovery a site visit would be necessary according to the approach of Lassus in understanding place.[353] As the scope of this research thesis was limited to Japan and New Zealand, there is an area of natural disaster memorials in different cultures with a range of responses from governing bodies and communities that would be worthy of further research.

The politicisation of establishing a memorial to human conflict is debated in literature but is not discussed in relation to natural disasters. My thesis research raised many questions that were beyond the scope of a masters, including: is there a number of deaths that determines whether a memorial is warranted; should the memorial be sited at the exact place where the tragedy occurred (this is briefly mentioned in this thesis); what is the process of establishing a memorial, and how much the public are engaged, and how is that consultation performed; what criteria is set out in a design brief; is space provided for artefacts left at memorial sites and how are they archived or not; how well does a memorial meet the emotional needs of grieving survivors; how do memorials and their role in society change over time?

The West Coast of the South Island of New Zealand lies in a precarious position as it will be among the worst affected areas of New Zealand when the AF8 earthquake occurs. Limitations of space and time in the thesis restricted investigation into the level of education and preparedness of the West Coast but a brief examination of the Civil Defence Emergency Management plan 2016[354] indicates a generalised approach, and does not provide specifics identifying hazard locations, and action plans for communities. Further research may reveal an opportunity for improved education within the community through the establishment of a hybrid memorial-museum. The infrastructure required to protect communities from the predicted devastation would memorialise in advance of the natural disaster rather than retrospectively when the loss of lives and damage occurred. Japan knows too well the cost of lack of preparedness.

[353] (Lassus, 1998) p.57
[354] (Alpine Fault Magnitude 8, 2020)

This thesis opened-up an area of research that is in its infancy in New Zealand and left many questions yet to be explored. As research develops, and other scholarly literature contributes to the understanding of memorials to natural disasters, their role in society may be more highly valued. The significant role of memorials in education, is a visible vehicle for the empowerment of survival against an invisible enemy. While a remembrance memorial of a natural disaster after each event may be called for, investment in the memorial-museum hybrid, if not already established, opens possibilities to be ahead of impending disasters. Their purpose is to educate not only for an understanding of the plight of others suffering but to be prepared, feel safe, reduce anxiety, and minimise loss of homes, livelihoods, and life.

References

Alabaster, J. (2011). Residents of tsunami-ravaged towns forgot wisdom left by ancestors. Retrieved from https://www.thestar.com/news/world/2011/04/06/residents_of_tsunamiravaged_towns_forgot_wisdom_left_by_ancestors.html

Alpine Fault Magnitude 8. (2020). *Emergency Response Planning*. Retrieved from https://af8.org.nz/safer-framework/emergency-response-planning/

Anderson, B. (2009). Affective atmospheres. *Emotion, Space and Society, 2*(2), 77-81. doi:10.1016/j.emospa.2009.08.005

Anderson, B. (2014). *Encountering affect : capacities, apparatuses, conditions*: Surrey, England, Burlington, Vermont : Ashgate.

Asian Disaster Reduction Center. (2020). *Asian Disaster Reduction Center*. Retrieved 2020,from https://www.adrc.asia/

Assefa, E. M. (2003). Inside and Outside in Wright's Fallingwater and Aalto's Villa Mairea. *Environmental & Architectural Phenomenology, 14 (2)*, 11-15.

Attoe, W. (1976). Methods of Criticism and Response to Criticism. *JAE, 29*(4), 20-21. doi:10.2307/1424338

Attoe, W. (1978). *Architecture and critical imagination*. Chichester, New York: Wiley.

Atwood, M. (2016). *The Handmaid's Tale*: London, England : Vintage.

BBC News. (2019). Australia climate change: Thousands rally in Sydney amid bushfires. Retrieved 22 May 2020 https://www.bbc.com/news/world-australia-50748419

Berrizbeitia, A. (1999). *Inside outside : between architecture and landscape*. Gloucester, Mass. : London: Gloucester, Mass. : Rockport, London : Hi Marketing.

Blanchon, B. (2016). Criticism: the potential of the scholarly reading of constructed landscapes. Or, the difficult art of interpretation. *Journal of Landscape Architecture, 11*(2), 66-71. doi:10.1080/18626033.2016.1188575

Bowring, J. (2013). Melancholy, memories, and six nostalgias: Postquake Christchurch and the problems of recalling the past. *Change Over Time, 3*(1), 82-101.

Bowring, J. (2017). *Melancholy and the Landscape : Locating Sadness, Memory and Reflection in the Landscape*. Abingdon, Oxon: London: Routledge. doi:10.4324/9781315670386

Bowring, J. (2020). *Landscape Architecture Criticism*. Forthcoming

Bowring, J., & Swaffield, S. (2013). Shifting landscapes in-between times. *Harvard Design Magazine, 36*, 96-104.

Bressan, D. (2012). Namazu the Earthshaker. Retrieved from https://blogs.scientificamerican.com/history-of-geology/namazu-the-earthshaker/

Bruns, D., Van den Brink, A., Tobi, H., Bell, S. (2017) *Landscape Architecture Research Methods*. Routledge UK. Chapter 7.

Bureau, P.-D. R. D. C. P. P., &. (2017). *Road to Recovery Sendai*: City of Sendai,.

Cabinet Office, e.-G. (2019). *White Paper Disaster Management in Japan 2019*. Asian Disaster Reduction Center (ADRC). Retrieved from https://www.adrc.asia/nationinformation.php?NationCode=392&Lang=en&NationNum=23

Cabinet Office Japan. (2015). *Disaster Management in Japan*. Retrieved from http://www.bousai.go.jp/index-e.html

Canterbury Museum. (2020). *Quake City*. Retrieved from https://www.canterburymuseum.com/whats-on/quake-city/

Centre for Liveable Cities Singapore. (2016). *Rikuzentakata: Rebuilding with Resilience*. Retrieved from https://www.clc.gov.sg/research-publications/publications/digital-library/view/rikuzentakata-rebuilding-with-resilience

Chamberlain, B. H. (1905). *Things Japanese: being notes on various subjects connected with Japan for the use of travellers and others*: London: J. Murray, etc., etc.

Christchurch City Council. (2018). *Blessing for newly landscaped CTV site*. Retrieved 24 April 2010, from https://newsline.ccc.govt.nz/news/story/blessing-for-newly-landscaped-ctv-site
Christchurch City Libraries. (2020). *Ōtākaro – Avon River*. Retrieved 29 April 2020, 2020,from https://my.christchurchcitylibraries.com/ti-kouka-whenua/otakaro/
City of Kobe. (2010). *Comprehensive Strategy for Recovery from the Great Hanshin-Awaji Earthquake*. Retrieved from https://www.city.kobe.lg.jp › documents › english_1
Coats, A., & Ferguson, S. (2013). Rubbernecking or Rejuvenation: Post Earthquake Perceptions and the Implications for Business Practice in a Dark Tourism Context. *Journal of Research for Consumers*(23), 10-14.
Davis, S., & Bowring, J. (2011). Connecting with tragedy through landscapes of memory: memorial design, tourism, and the post-genocide memoryscapes of Cambodia, Rwanda, and Germany. 376-391.
Day, S. (2014). Natural disaster recovery - parallels with Japan. *The Press*. Retrieved from http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/9884652/Natural-disaster-recovery-parallels-with-Japan?rm=m
Deming, M. E. (2011). *Landscape architecture research : inquiry, strategy, design*. Hoboken, N.J.: Hoboken, N.J. : Wiley.
Desk, A. E. (2018). *Jasmax's CTV memorial completed* Retrieved 21 April 2020, 2020,from https://architecturenow.co.nz/articles/new-beginnings-ctv-memorial-site-jasmax/
Donohoe, J. (2002). Dwelling with monuments. *Philosophy & Geography, 5*(2), 235-242. doi:10.1080/10903770220152434
Eagleton, T. (1990). *The Ideology of the Aesthetic*. Malden, MA: Blackwell Oublishers Ltd.
Fackler, M. (2011). Tsunami Warnings, Written in Stone. Retrieved from https://www.nytimes.com/2011/04/21/world/asia/21stones.html
Foote, K. E. (2003). *Shadowed Ground America's Landscapes of Violence and Tragedy, revised and updated* (Rev. and updated, rev. ed.. ed.). Austin: Austin : University of Texas Press.
Forty, A. (2015). *Adrian Forty - The Art of Forgetting*. Retrieved from https://www.youtube.com/watch?v=EDLHUTYz288
Franses, R. (2001). Monuments and melancholia. *Journal for the Psychoanalysis of Culture and Society, 6 (1)*, 97-104.
Goličnik, B., & Thompson, C. W. (2010). Emerging relationships between design and use of urban park spaces. *Landscape and urban planning, 94*(1), 38-53.
Good Design Award. (2015). *Good Design Award*. Retrieved from http://www.g-mark.org/award/describe/43008?locale=en
Goodman, J. (2020). What is Australia doing to tackle climate change? *BBC News*. Retrieved from https://www.bbc.com/news/world-australia-50869565
Harris, D. (2018, 22 February 2018). Christchurch earthquake memorial service: 'NZ stands with Christchurch'. *The Press*. Retrieved from https://www.stuff.co.nz/the-press/news/101676510/christchurch-earthquake-memorial-service-future-marked-with-hope
Hetzler, F. M. (1988). Causality: Ruin Time and Ruins. *Leonardo, 21*(1), 51-55. doi:10.2307/1578416
Horizons. (2011). Saved by their ancestors. *A World of Science, 9*(3), 20-23.
Hurst, D. (2019, 12 June 2019). 'This is not a "what if" story': Tokyo braces for the earthquake of a century *The Guardian*. Retrieved from https://www.theguardian.com/cities/2019/jun/12/this-is-not-a-what-if-story-tokyo-braces-for-the-earthquake-of-a-century
Ings, W., & Fox, A. (2001, Nov-Dec 2001). Roadside Crosses: A Memorial and a Message. *New Zealand Geographic*(054). Retrieved from https://www.nzgeo.com/stories/roadside-crosses-a-memorial-and-a-message/
Jay, M. (2003). *Refractions of Violence*. New York: New York: Routledge. doi:10.4324/9781315024448

Jiji. (2020a, March 11 2020). Nine years on, monuments in Tohoku pass on lessons and memories from 3/11. *The Japan times*. Retrieved from https://www.japantimes.co.jp/news/2020/03/11/national/monuments-311-ninth-anniversary/

Jiji. (2020b). Tohoku communities scaling down 3/11 memorial events due to coronavirus. *The Japan Times*. Retrieved from https://www.japantimes.co.jp/news/2020/03/05/national/covid-19-311-memorial-events-japan/

Jung, J.-Y., Toriumi, K., & Mizukoshi, S. (2013). Neighborhood storytelling networks, Internet connectedness, and civic participation after the Great East Japan Earthquake. *Asian Journal of Communication, 23*(6), 637-657. doi:10.1080/01292986.2013.819930

Kanopy. (2014). Peter Eisenman : building Germany's Holocaust Memorial: San Francisco, California, USA : Kanopy Streaming.

Karlsruhe Institute of Technology, &. (2016). *Natural Disasters since 1900: Over 8 Million Deaths and 7 Trillion US Dollars damage* Karlsruhe Institute of Technology: Karlsruhe Institute of Technology.

Kelley, J. (1994). *Mapping the Terrain: New Genre Public Art*. Seattle, WA: Bay Press.

Kittaka, L. G. (2015, 7 March, 2015). Rikuzentakata looks to future with new tourism ventures. *The Japan Times* Retrieved from https://www.japantimes.co.jp/life/2015/03/07/travel/rikuzentakata-looks-future-new-tourism-ventures/

Klein, C. (2016). *The Remarkable Story of Maya Lin's Vietnam Veterans Memorial*. Retrieved from https://www.biography.com/news/maya-lin-vietnam-veterans-memorial

Krauss, R. (1979). Sculpture in the Expanded Field. *October, 8*, 31-44.

Krummel, J., & E. N. Zalta. (2018). *Kukai* [The Stanford Encyclopedia of Philosophy]. Metaphysics Research Lab, Stanford University.

Kyodo News. (2019). Olympics: 2011 "Miracle Pine" on Tokyo 2020 torch itinerary Retrieved from https://english.kyodonews.net/news/2019/05/d200da4b3cb1-olympics-2011-miracle-pine-on-tokyo-2020-torch-itinerary.html

Lange, A. (2012). *Writing about architecture mastering the language of buildings and cities* (1st ed.. ed.): New York : Princeton Architectural Press.

Lassus, B. (1998). *The landscape approach*. Philadelphia, Pa.: Philadelphia, PA. : University of Pennsylvania Press.

Lauzon, R. C. (2019). Memorial space and its mnemonic function. *Memory Studies*, 175069801988872. doi:10.1177/1750698019888723

Lewis, D. (2015). These Century-Old Stone "Tsunami Stones" Dot Japan's Coastline. *Smartnews*. Retrieved from https://www.smithsonianmag.com/smart-news/century-old-warnings-against-tsunamis-dot-japans-coastline-180956448/

Lin, M. (2000). *Boundaries*: Simon and Schuster.

Lovell Chen Architects & Heritage Consultants. (2010). *Shrine of Remembrance St Kilda Road, Melbourne*. Heritage Victoria. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=22&ved=2ahUKEwjL47ft3ZvpAhXEwTgGHVBUBQYQFjAVegQIBBAB&url=http%3A%2F%2Fimages.heritage.vic.gov.au%2Fattachment%2F64891&usg=AOvVaw0QQy8wqYHYmdthDbZXmfNN

Lynch, P. (2016). This Speculative Project Imagines A Mixed-Use Building Wrapped Around the Arc de Triomphe *ArchDaily*.

Magdefrau, N. (2016). *Building Urban Resilience Through Spatial Planning Following Disasters The Great East Japan Earthquake and Tsunami* (Dissertation). Technical University of Dortmund, Germany, Semanticscholar.org. Retrieved from g/9fb7/95d845bd0fe29f3ddb3913cf7673d5e0c207.pdf

Mainichi, T. (2020, January 17, 2020). Kobe marks quarter-century anniversary of massive quake disaster. Retrieved from https://mainichi.jp/english/articles/20200117/p2g/00m/0na/017000c

Mandelartz, P. (2016). *Thanatourism : case studies in travel to the dark side*: Oxford, England : Goodfellow Publishers Ltd.
Martini, A., & Minca, C. (2018). Affective dark tourism encounters: Rikuzentakata after the 2011 Great East Japan Disaster. *Social & Cultural Geography*, 1-25. doi:10.1080/14649365.2018.1550804
McKie, R. (2005). Ancient legends give an early warning of modern disasters. *The Guardian*. Retrieved from https://www.theguardian.com/world/2005/dec/04/naturaldisasters.climatechange
Messman, L. (2019, Nov. 20. 2019). AIDS Memorial Quilt to Return Home to San Francisco. *The New York Times*. Retrieved from https://www.nytimes.com/2019/11/20/arts/design/aids-memorial-quilt-san-francisco.html
Mumford, L. (1938). *The Culture of Cities*: New York, New York : Open Road Integrated Media, Inc. (Original work published 1938)
Nagano, Y. (2014). In hard-hit Okawa, Japan, life remains a struggle after 2011 tsunami *Los Angeles Times*. Retrieved from https://www.latimes.com/world/asia/la-fg-japan-tsunami-recovery-20141107-story.html
Nakasu, T., Ono, Y., & Pothisiri, W. (2018). Why did Rikuzentakata have a high death toll in the 2011 Great East Japan Earthquake and Tsunami disaster? Finding the devastating disaster's root causes. *International Journal of Disaster Risk Reduction, 27*, 21-36. doi:https://doi.org/10.1016/j.ijdrr.2017.08.001
National Emergency Management Agency. (2020). *Get Ready*. Retrieved 01 May 2020, 2020,from https://getready.govt.nz/emergency/
National September 11 Memorial & Museum. (2020). *9/11 Memorial & Museum*. Retrieved 3 March 2020, 2020,from https://www.911memorial.org/
New Zealand Transport Association. (2020). *Rebuilding quickly, but with care*. Retrieved 11 April 2020, 2020,from https://www.nzta.govt.nz/projects/kaikoura-earthquake-response/caring-for-the-environment/rebuilding-quickly-but-with-care/
Nippon.com. (2019). *Kobe Luminarie: "Twenty-Five Years Guided by the Light of Hope"*. Retrieved 19 April 2020, 2020,from https://www.nippon.com/en/news/thepage20191206002/kobe-luminarie-twenty-five-years-guided-by-the-light-of-hope.html
Nose, M. R. (2002). *The Modern Japanese Garden*: Mitchell Beazley, Octopus Publishing Group Ltd, 2-4 Heron Quays, London
Otake, T. (2011). Awaji Island quake museum offers shocks and survivors. *the Japan times*. Retrieved from https://www.japantimes.co.jp/life/2011/04/10/general/awaji-island-quake-museum-offers-shocks-and-survivors/
Phro, P. (2013). Project to preserve Rikuzentakata 'Miracle Pine' draws criticism on Internet. *Japan Today*. Retrieved from https://japantoday.com/category/national/iwate-miracle-pine-returnsafter-a-few-adjustments
Rojek, C., & Urry, J. (1997). *Touring cultures : transformations of travel and theory*. London, New York: London, New York : Routledge.
Santiago-Fandiño, V., & Mas, E. (2018) The coastal environment and the reconstruction process after the Great East Japan Earthquake: A few notes. *Vol. 47. Advances in Natural and Technological Hazards Research* (pp. 291-338).
Schama, S. (1995). *Landscape and memory* (1st ed.. ed.). New York: New York : A.A. Knopf : Distributed by Random House.
Schwarzer, M. (2013). Landscape navigator. *Harvard Design Magazine*(36), 136-144.
Sendai City. (2020). *Inclusive Disaster Risk Reduction*. Retrieved from https://sendai-resilience.jp/en/efforts/practice/practice_02.html
ShakeOut.org. (2020). *Great ShakeOut*. Retrieved 01 May 2020, from https://www.shakeout.org/
Sharpley, R., & Stone, P. R. (2009). *The darker side of travel : the theory and practice of dark tourism*. Bristol UK, NY USA, Ontario Canada: Channel View Publications.

Sidedoor Arts Trust. (2020). *185 Empty White Chairs Remembrance of 22nd February 2011*. Retrieved 24 April 2020, 2020,from https://www.185chairs.co.nz/
Sontag, S. (2003). *Regarding the pain of others*: New York : Picador.
Steinmetz, G. (2008). Harrowed landscapes: white ruingazers in Namibia and Detroit and the cultivation of memory. *Visual Studies, 23*(3), 211-237. doi:10.1080/14725860802489890
Stevens, Q. (2009). Nothing More Than Feelings: Abstract Memorials. *Architectural Theory Review, 14*(2), 156-172. doi:10.1080/13264820903049232
Stevens, Q. (2012). Visitor responses at Berlin's Holocaust Memorial: Contrary to conventions, expectations and rules. *Public Art Dialogue, 2*(1), 34-59.
Stevens, Q., & Franck, K. A. (2015). *Memorials as Spaces of Engagement: Design, Use and Meaning*: Routledge.
Stiftung Denkmel fur die ermordeten Juden Europas. (2019). *Information Centre Under the Field of stelae*. Retrieved 2020,from https://www.stiftung-denkmal.de/ausstellung/information-centre-under-the-field-of-stelae/?lang=en
Stone, P. R., Hartmann, R., Seaton, A., Sharpley, R., & White, L. (Eds.). (2018). *The Palgrave handbook of dark tourism studies*. London, United Kingdom: Springer Nature.
Sturken, M. (1999). Imaging postmemory/renegotiating history. *Afterimage, 26*(6), 10-12.
Sugio, K. (2015). Large-scale Disasters on World Heritage and Cultural Heritage in Japan: Significant Impacts and Sustainable Management Cases. *Landscape Research: Cultural Landscapes in the 21st Century: Issues and Opportunities, 40*(6), 748-758. doi:10.1080/01426397.2015.1057806
Sumartojo, S. (2015). On atmosphere and darkness at Australia's Anzac Day dawn service. *Visual Communication, 14*(3), 267-288.
Suppasri, A., Abe, Y., Yasuda, M., Fukutani, Y., Imamura, F., & International Research Institute of Disaster Science, T. U., Sendai, Japan. (2015). Tsunami Signs, Memorials and Evacuation Drills in Miyagi Prefecture After 2011 Tohuku Earthquake Tsunami. In M. Esteban, H. Takagi & T. Shibayama (Eds.), *Handbook of Coastal Disaster Mitigation for Engineers and Planners* (pp. 615-631). Boston: Butterworth-Heinemann. doi:https://doi.org/10.1016/B978-0-12-801060-0.00028-9
Suppasri, A., Shuto, N., Imamura, F., Koshimura, S., Mas, E., & Yalciner, A. (2013). Lessons Learned from the 2011 Great East Japan Tsunami: Performance of Tsunami Countermeasures, Coastal Buildings, and Tsunami Evacuation in Japan. *pure applied geophysics, 170*(6), 993-1018. doi:10.1007/s00024-012-0511-7
Teppei Kobayashi, Y. O., Katsuya Hirano, Michio Ubaura. (2016). Practical Efforts for Post-Disaster Reconstruction in the City of Ishinomaki, Miyagi. *Journal of Disaster Research, 11*(3), 476-484. doi:10.20965/jdr.2016.p0476
The Press. (2017, 19 June 2017). Christchurch Dilemmas: 185 White Chairs - Stay or Go? *The Press*. Retrieved from https://www.stuff.co.nz/the-press/news/93818697/christchurch-dilemmas-185-white-chairs--stay-or-go
The Royal New Zealand Returned and Service Association. (2020). *Anzac Day today: what it means and how to participate*. Retrieved 2020,from https://www.rsa.org.nz/anzac-day-today-what-it-means-and-how-participate
Till, K. E. (2005). *The new Berlin memory, politics, place*. Minneapolis: Minneapolis : University of Minnesota Press.
Till, K. E. (2008). Artistic and activist memory-work: Approaching place-based practice. *Memory Studies, 1*(1), 99-113. doi:10.1177/1750698007083893
Till, K. E., & Kuusisto-Arponen, A. K. (2015). Towards responsible geographies of memory: Complexities of place and the ethics of remembering [Article]. *Erdkunde, 69*(4), 291-306. doi:10.3112/erdkunde.2015.04.01
Ting, G. Q. (n.d., 17 Jan 2020). Kobe Luminarie: A time to remember, remind and rebuild. Retrieved from https://hyogojapan.com/kobe-luminarie-remember/

Treib, M. (2004). Landschaftsarchitektur und Kritik = landscape architecture and criticism. *Topos Landscape architecture and criticism, 49*, 6-21.
Treib, M. (2018). Ethics ≠ Aesthetics. *Journal of Landscape Architecture, 13*(2), 30-41. doi:10.1080/18626033.2018.1553391
Trigg, D. (2006). *The aesthetics of decay : nothingness, nostalgia, and the absence of reason*. New York: New York : Peter Lang.
United Nations. (2020). *World Tsunami Awareness Day 5 November*. Retrieved from https://www.un.org/en/events/tsunamiday/
United Nations Office for Disaster Risk Reduction. (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030*. Prevention Web. Retrieved from https://www.preventionweb.net/publications/view/43291
United Nations Office for Disaster Risk Reduction. (2019). *School for tsunami risk draws crowds*. Retrieved from https://www.undrr.org/news/school-tsunami-risk-draws-crowds
University of Canterbury. *Quake Centre*. Retrieved 06.12.2019, 2019,from http://www.quakecentre.co.nz/Facts-figures-__I.5857__N.112
Urbane, &. (2017). *Aceh Tsunami Museum at Indonesia Architect Week Seoul 2017* Indonesia: urbane.co.id.
van Leeuwen, H. (2020, Jan 22 2020). 'False': Cormann defends climate action at Davos. *Australian Financial Review*. Retrieved from https://www.afr.com/policy/energy-and-climate/cormann-goes-on-front-foot-as-australia-comes-under-fire-at-davos-20200122-p53tj0
Vezjak, G. (2017). *Oi Manawa – Canterbury Earthquake National Memorial*. Retrieved 23 October 2019, from http://gregavezjak.com/portfolio-item/oi-manawa/
Walliman, N. (2018). *Research methods : the basics* (Second edition.. ed.). Abingdon, Oxon, New York, NY: Routledge, an imprint of the Taylor & Francis Group.
Ware, S.-A. (2015). Memorial Camels and Design by Committee: St Andrews Black Saturday Memorials. *Landscape Review, 15*(2).
wikipedia.org. (2019). *Kobe Luminarie*. Retrieved 17 Jan 2020, 2020,from https://en.wikipedia.org/wiki/Kobe_Luminarie
World Bosai forum/IDRC 2019 in Sendai. (2019). *Lessons from the Great East Japan Earthquake 3.11 Densho Road* Retrieved from http://www.thr.mlit.go.jp/2019wbf/report_en.html
Yin, R. K. (2018). *Case study research and applications : design and methods* (Sixth edition.. ed.): Thousand Oaks, California : SAGE Publications, Inc.
Young, J. E. (1992). The Counter-Monument: Memory against Itself in Germany Today. *Critical Inquiry, 18*(2), 267-296. doi:10.1086/448632
Young, J. E. (1993). *The texture of memory : Holocaust memorials and meaning*. New Haven: New Haven : Yale University Press.
Young, J. E. (2016). *The stages of memory: Reflections on memorial art, loss, and the spaces between*: University of Massachusetts Press, Kindle edition.
Young, J. E. (Writer/Producer/Director). (2019). *Confronting Our Past: The Role of Memorials and Memorialization*. United States: Amherst Media. Retrieved from https://amherstmedia.org/content/confronting-our-past-role-memorials-and-memorialization